# Index

<table>
<thead>
<tr>
<th>S.no</th>
<th>Chapters</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Introduction to Nursing</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Organogram of Nursing Staff</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Job Description: Nursing Superintendent/Matron/Sister In Charge</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Job Description: Ward In charge</td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Job Description: Staff Nurse</td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Job Description: Nursing Trainee</td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>General Instructions for Nurses</td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>General Nursing</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Special Nursing Procedures</td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Policies</td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>References</td>
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EXECUTIVE SUMMARY:

It is an important resource for practice, but ensuring that the correct procedure can be located when needed in an on-going challenge. There is immense need of this document for the state. It is a good practice to compile all the rules/guidelines concerning the management and procedure in a manual that can be made available for reference. The nurse is the hub of all activities in a hospital centred around the patient. Nursing is a dynamic, therapeutic and educative process in meeting the health care needs of the patient.

The objectives are as follows: It ensure that nurses can practice to the full extent of their education and training, improve nursing education, provide opportunities for nurses to assume leadership positions and to serve as full partners in health care redesign and improvement efforts, and improve data collection for workforce planning and policy making.

Scope of the document is as follows: Document has been prepared as a reference for hospital staff to use as guideline for day to day practices, where hospital has standardized its processes. Chapters included are: 1.Job Description 2.General Instructions 3.Nursing Procedures: i) General Nursing ii)Special Nursing and 4. Policies.

General Nursing Includes: General Nursing Procedures include: nursing assessment, Blood Pressure Technique, Care of Pressure Area, Insertion of Nasogastric Tube, Insertion of Suppositories, Oral Care, bed / sponge bath Back Care, oral medication, intramuscular injection, subcutaneous injection, assisting in intravenous infusions, steam inhalation, serving of medication through nasogastric tube.

Special Nursing Includes: Special Nursing Procedures include NICU/PICU, Operation Theatre, OBS/Gynae, Dialysis, HDU, Burn Care Unit.

Policies includes: Transfer or Referral of Patients Who Do not match the Organization resources, Critical and Non Critical Patient Test Results, Discharge Policy, Left Against Medical Advice (L.A.M.A), Emergency Care, Medico Legal Cases.

Future perspective are as follows: Remove scope of practice barriers, Expand opportunities for inter professional collaboration, Ensure that nurses engage in lifelong learning, Prepare and enable nurses to lead change and advance healthcare, Build an infrastructure for data collection, Provide quality care to patients, Increase Patient Satisfaction.

It can be concluded that now is the time to eliminate the outdated regulations and organizational and cultural barriers that limit the ability of nurses to practice to the full extent of their education, training, and competence. Elimination of barriers for all professions with a focus on collaborative teamwork will maximize and improved care throughout the health care system. Together, the nurses with other health Professionals have the power to transform the health care system to provide seamless, affordable, quality care that is accessible to all, patient centered, and evidence based and leads to improved health outcomes.
The performance of clinical procedures is “governed” by written policies. Policies outline the steps you should follow in a particular situation and usually provide an explanation of why it is important to proceed in the outlined manner.

The format of policies and procedures is usually a policy statement which states the Hospital’s belief regarding a specific issue and a procedure portion which states what action is to be taken, who is responsible, and what documentation is necessary. Procedures should be written to provide for discretions to be exercised by nurses as they consider the facts of specific situations and are not absolute rules.

The growing gap between the supply of health care professionals and the demand for their services is a critical issue facing governments, managers and professionals seeking to improve international health and development. There are a number of complex and interrelated factors that contribute to the ongoing workforce shortage globally, including poorly resourced health systems, unsatisfactory working conditions and inadequate human resources management.

It is in this context that this manual have turned their attention to using incentives to improve the recruitment, motivation and retention of nursing professionals. Incentives are important levers that organizations can use to attract, retain, motivate, satisfy and improve the performance of staff. Their use is common in public and private sector organizations across all work settings. They can be applied to individuals, groups of workers, teams or organizations and may vary according to the type of employer (e.g. nongovernmental organization, public or private). Incentives can be positive or negative, financial or non-financial, tangible or intangible. Financial incentives are integral to the employment contract. Financial incentives involve “direct monetary payment from employer to employee”, such as wages, bonuses or loans. They fall into three main categories. First, there are the basic wages and conditions that are offered to staff related to their role description and work classification. Second, there are additional payments or bonuses that are linked to the achievement of performance outcomes, with access to the payment either specified in advance or retrospectively assessed as part of a staff review or supervision process. Third, there may be additional financial incentives that are not directly related to the performance of the person’s duties, such as access to financial services or fellowships.

Timely incentivizing of the nursing professionals will be done based on their performances. This will not only motivate them but will also help in providing quality care to patients which will increase patient’s satisfaction.

A health service’s greatest asset is its staff. The implementation of effective incentive packages represents an investment through which that vital asset can be protected, nurtured and developed.
Scope of Document

This document has been prepared as a reference for hospital staff to use as guideline for day to day practices, where hospital has standardized its processes. Readers are expected to read the document thoroughly and implement in their respective department.

Approval and Issue

Hospital has established documentation for quality system conforming to NABH requirements. This manual indicates the Hospital’s commitment to quality practices for all the functional disciplines, and that they are being maintained so as to be objectively verifiable at any stage. This document has been approved and issued for implementation.

The manual is the property of District Hospitals Uttar Pradesh and shall not be used in any way detrimental to the interest of the hospital. The manual shall be issued and controlled as per the Document Control Procedure defined in quality manual.

All the authorized holders shall be responsible to keep this document updated by incorporating the latest amendments issued from time to time. Holders of the controlled copies of this manual shall return the same to Quality department when there is no further requirement of that copy or when the holder ceases to be an employee of District Hospitals.

The authority over control of this manual is as follows:
**Document Control Page**

<table>
<thead>
<tr>
<th>Document Name</th>
<th>Nursing Manual</th>
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</thead>
<tbody>
<tr>
<td>Document No.</td>
<td>Nur/Man/01</td>
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<tr>
<td>Copy No.</td>
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<td>Issue No.</td>
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<td>Revision No.</td>
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<td>Prepared By</td>
<td>Nursing Superintendent</td>
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<td>Approved By</td>
<td>Chief Medical Superintendent</td>
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<td>Issued By</td>
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<tr>
<td>Issue Date</td>
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<tr>
<td>Next Review Date</td>
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</tbody>
</table>

**Relevant Points:**
- This is the Nursing Manual of District Hospitals of Uttar Pradesh.
- The distributed copy shall be kept in safe custody of the in-charge of the Dept/HOD, who will be responsible to train the staff in this policy as applicable to particular category of staff.
- Amendments to the document will be approved by the CMS.
- All amendments and additions to this manual will be enclosed at the appropriate page in the document by the custodian of the manual, who will authenticate the entry with his signature including the date and time of endorsement.
### Amendment Sheet

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Section/Chapter/Para No.</th>
<th>Revision No./ Date</th>
<th>Details of amendment</th>
<th>Sign of authorizing official</th>
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APPROVAL AND ISSUE

Hospital has established documentation for quality system conforming to NABH requirements. This manual indicates the Hospital’s commitment to quality for all the functional disciplines, and that they are being maintained so as to be objectively verifiable at any stage. This document has been approved and issued for implementation. The manual is the property of District Hospitals Uttar Pradesh and shall not be used in any way detrimental to the interest of the hospital.

The manual shall be issued and controlled as per the Document Control Procedure defined in quality manual.

All the authorized holders shall be responsible to keep this document updated by incorporating the latest amendments issued from time to time. Holders of the controlled copies of this manual shall return the same to the Deputy Medical Superintendent when there is no further requirement of that copy or when the holder ceases to be an employee of District Hospitals Uttar Pradesh.
INTRODUCTION TO NURSING

District Hospitals takes pride in the professional and compassionate care given to the patients admitted in the hospital. This is primarily due to well trained and caring nursing staff in the hospital. The nursing department is led by the nursing in charge, who does not only keep a close watch on the services but is also actively involved in training and skill enhancement of the staff.

The essential motto of the nursing department is to give the best possible care to patients so that both the doctors and patients feel that they are in safe hands.

- To provide guideline instructions for General Nursing care with the aims that Needs and expectations of patients are established and Patient satisfaction is enhanced on continual basis.
- Care of patient is coordinated in all patient’s care areas within the organization. Information about the patient’s care and response to treatment is shared among treating consultant, matron, nurse in charge, and nursing staff and is documented during shift and exchanged at the time of duty hand over or shift change. Case file is handed over to related unit or ward nursing staff where patient need to be shifted. Patient record is available to only doctors and nursing staff.

Scope : It covers all in patients receiving treatment in the hospital.
Responsibility : Matron, Nursing In-charge and Ward nurse.
NAME OF THE DISTRICT HOSPITAL

DH/Nur/Man/01

NURSING MANUAL

Issue date:
Issue No.:
Rev. date:
Rev No.:
Effective Date:

ORGANOGRAM OF NURSING DEPARTMENT

Nursing Superintendent

Matron

Sister In Charge

Ward In Charge

Staff Nurse

Trainees
Nursing Matron - TOR

Administrative
1. Maintaining decorum among nursing personnel particularly for dress, courtesy & behavior, timeliness keeping cool during crisis
2. Preparing duty roster of nursing personnel along with non-rotational postings in all critical areas
3. Undertake joint daily rounds with hospital manager. Following areas must be seen closely:
   a) cleanliness,
   b) adherence to infection prevention protocols,
   c) respectful care to all but particularly to poor, vulnerable, weaker sections of society, women and children,
   d) technical protocols are adhered in all service delivery areas,
   e) unnecessary stores and junk are not lying in service areas
4. Maintaining the records of attendance of nursing staff and leave of any kind
5. Maintaining the confidential report and records of nursing personnel
6. Checking whether duty rosters are displayed in different departments, monitor whether they are updated daily as per the duty roster schedule
7. Conducting regular physical verification of hospital stocks, i.e. drugs, equipment etc. in the patient care area
8. Observing whether the indents are based on consumption or not
9. Checking whether relevant records are being maintained by nurses on duty
10. Reporting on the requirements of different wards on seepage, infrastructural damages, Pest control etc.
11. Assist MS/NS in redressal of grievances
12. Ensuring nurse In-charges in different wards take client feedback at the time of discharge

Patient care
13. Checking whether room-wise protocols are displayed in each department along with performance indicators, equipment maintenance schedule and cleaning schedule
14. Monitoring the cleanliness of the different service areas, check whether the housekeeping checklist is maintained daily by Staff in-charge
15. Checking whether patient privacy is ensured or not in the OPD examination areas, IPD procedure rooms, L.R etc.
16. Ensure nursing staff attends on priority and with dignity to emergency patients, vulnerable, poor, rape victim and challenged people
17. Checking with I/C nurses of different departments whether they have adequate medicines, equipment, consumables for that particular day.
18. Monitoring whether the critical equipment are in functional state or not.
19. Monitoring and recording the critical indicators of hospital like – bed occupancy, death rate, mid-night head count etc.
20. Monitoring that the handing-over and taking-over protocols are followed in critical departments like LR, SNCU, O.T etc.
21. Monitoring whether the distribution of food is occurring at the assigned time to patients, it is served hot & fresh and quality is good
22. Checking whether infection prevention protocols are being implemented properly in service areas
23. Ensuring adherence to sharp management protocols. These encompass various aspects, e.g., disinfection of sharp in bleaching sol, use of needle destroyer, puncture proof box at required working areas
24. Checking whether biomedical waste disposal practices are being followed as per protocol. Checking the segregation, collection of biomedical waste as per BMWM guidelines
25. Guiding I/C nurse of different departments in removal of unnecessary items, non-functional equipment etc.
26. Ensuring regular, proper & effective undertaking of pest control measures inside hospital building & all over the campus especially during winter & rainy season.
27. Daily rounds to ensure restriction of entry during non-visiting hours
28. Checking that wards are ready for doctors rounds

Educational/teaching and training
29. Arranging orientation programs for new nursing staff
30. Providing guidance and counseling to nursing staff
31. Ensuring clinical experience facilities for student nurses in various clinical areas of the hospital
### Checklist for Matron: Hospital round

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Observe/Monitor and guide</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Display of duty roster and presence of staff accordingly in their respective duty station</td>
<td>1/1</td>
</tr>
<tr>
<td>2.</td>
<td>Staff is in proper uniform &amp; maintains decorum</td>
<td>2/1</td>
</tr>
<tr>
<td>3.</td>
<td>Clinical practices as per the SoPs in each service area</td>
<td>3/1</td>
</tr>
<tr>
<td>4.</td>
<td>Privacy during patients’ examination are maintained in all service areas</td>
<td>4/1</td>
</tr>
<tr>
<td>5.</td>
<td>Nursing staff performance in each duty station</td>
<td>5/1</td>
</tr>
<tr>
<td>6.</td>
<td>Wards’ readiness for doctors’ round</td>
<td>6/1</td>
</tr>
<tr>
<td>7.</td>
<td>Infection control protocols are practiced</td>
<td>7/1</td>
</tr>
<tr>
<td>8.</td>
<td>BMW is segregated properly</td>
<td>8/1</td>
</tr>
<tr>
<td>9.</td>
<td>Adherence to handing over-taking over protocols in all critical areas</td>
<td>9/1</td>
</tr>
<tr>
<td>10.</td>
<td>Records of IPD are maintained and complete in each service area</td>
<td>10/1</td>
</tr>
<tr>
<td>11.</td>
<td>Availability of stock required in every service area (drugs, gloves, mask, inj. etc.)</td>
<td>1/1</td>
</tr>
<tr>
<td>12.</td>
<td>Necessary equipment are available and functional in every service area</td>
<td>2/1</td>
</tr>
<tr>
<td>13.</td>
<td>Sterilization of the instruments is as per protocols in</td>
<td>3/1</td>
</tr>
<tr>
<td></td>
<td>13.1 Operation theatre</td>
<td>4/1</td>
</tr>
<tr>
<td></td>
<td>13.2 Labor Room</td>
<td>5/1</td>
</tr>
<tr>
<td></td>
<td>13.3 casualty</td>
<td>6/1</td>
</tr>
<tr>
<td></td>
<td>13.4 Any other department</td>
<td>7/1</td>
</tr>
<tr>
<td>14.</td>
<td>Only sterilized/autoclaved instruments are used in service areas</td>
<td>8/1</td>
</tr>
<tr>
<td>15.</td>
<td>Records of sterilization are maintained</td>
<td>9/1</td>
</tr>
<tr>
<td>16.</td>
<td>Cleanliness and check the cleaning checklist for completion in the below mentioned areas (OPD, Wards, Labor room, OT, Lab. &amp; diagnostic rooms, Injection &amp; dressing room, Toilets etc.)</td>
<td>10/1</td>
</tr>
</tbody>
</table>
### Checklist for Matron for Hospital round

**Mark the response in yes/no (Y/N)**

**Remarks sheet**

**Date of visit:**

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Name of the Department</th>
<th>Issue identified</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
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<tr>
<td>2.</td>
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<td>3.</td>
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<td>4.</td>
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<td>11</td>
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<td></td>
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<tr>
<td>12</td>
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</tbody>
</table>

*Note: Separate sheet needs to be used for every round to monitor the progress.*
Job Description: Ward In charge

Reporting to: Sister In charge

Overall Objective: To maintain the high quality nursing care of the patients by supervising the nursing staff and maintaining the documents of the floor.

<table>
<thead>
<tr>
<th>Responsibilities and key tasks</th>
<th>Most important demands</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Ward In charge will work under the guidance of Sister In charge.</td>
<td>Core competencies</td>
</tr>
<tr>
<td>• She will be responsible for overall nursing care of all the patients of the floor.</td>
<td>• Service excellence</td>
</tr>
<tr>
<td>• She will ensure that the nursing staff observe and follows the standard nursing procedures</td>
<td>• Team player</td>
</tr>
<tr>
<td>and no harm is done to patients through omission, error or negligence on any bodies part.</td>
<td></td>
</tr>
<tr>
<td>• She will supervise all the patients fill work or table or counter work require for the job</td>
<td>Technical competencies</td>
</tr>
<tr>
<td>and keep the floor neat and tidy.</td>
<td>• Responsible good content knowledge with good conceptual knowledge.</td>
</tr>
<tr>
<td>• She will maintain the cleanliness and working condition.</td>
<td></td>
</tr>
<tr>
<td>• She will maintain necessary data pertaining to their job, list of the files, register,</td>
<td>Behavior /leadership competencies</td>
</tr>
<tr>
<td>inventory and other important documents for easy working of the floor and shall present to</td>
<td>• Good knowledge of principles and practices of Nursing.</td>
</tr>
<tr>
<td>respective authority as and when require or at fixed periodicity.</td>
<td>• An inquiring approaches towards patient care</td>
</tr>
<tr>
<td>• She will ensure that all necessary emergency drugs are available and will check the expiry</td>
<td>• Communication skills.</td>
</tr>
<tr>
<td>date of the each and every drug.</td>
<td></td>
</tr>
<tr>
<td>• She will co-ordinate the job activities with other colleagues and will provide maximum</td>
<td></td>
</tr>
<tr>
<td>cooperation, so that there is no delay in work output.</td>
<td></td>
</tr>
<tr>
<td>• She will maintain inventory pertaining to rooms and other departments of the floor.</td>
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</tr>
<tr>
<td>• She will co-ordinate the services of housekeeping Dept. &amp; will keep close liaison with</td>
<td></td>
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<tr>
<td>housekeeping supervisor to see that rooms are cleaned in all respects before the patient</td>
<td></td>
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<tr>
<td>check-in.</td>
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<tr>
<td>• She may be rotated in their duties from floor to floor or any other counter wherever</td>
<td></td>
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<tr>
<td>required.</td>
<td></td>
</tr>
<tr>
<td>• She will perform any other duty assigned to her in the interest of hospital &amp; the patients.</td>
<td></td>
</tr>
<tr>
<td>• She will also maintain stock register pertaining to list of instruments general items &amp;</td>
<td></td>
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<tr>
<td>linen etc.</td>
<td></td>
</tr>
</tbody>
</table>

Success in 2 Years
• Well oriented with nursing flow processes.
• Confident in handling ward responsibilities independently
Job Description: Staff Nurse

Reporting to: Nursing In charge

Overall Objective: Assist the Nursing Supervisor to deliver high quality nursing care in the hospital.

Responsibilities and key tasks

- Responsible for delivery of patient care through implementation of prescribed medication and monitoring effects.
- Responsible for coordinating nursing care for patients based on established clinical practice standards.
- Collaborate with other professional disciplines to ensure effective and efficient patient care delivery.
- Actively participate in programs for quality improvement in nursing practices.
- Responsible for ensuring personal productivity as a team and maintaining positive interpersonal relations with staff.
- Promote a safe environment for patients, visitors and coworkers including the implementation of infection control policies of

Most Important Demands

- Core Competencies
  - Service Excellence
  - Team Player
  - Technical Competencies
  - Reasonable content knowledge with good conceptual knowledge.

- Behavioral/Leadership Competencies
  - Good knowledge of principles and practices of nursing.
  - An inquiring approach towards patient care.
  - Communication skills.
  - Education/Experience
  - Should have minimum ANM,
the hospital.

- To be responsible for checking the inventory maintained at each floor.
- To work in co-ordination with ward sec, Consultants, Housekeeping, Nursing Incharge.
- To be responsible to send the indent signed by them for requisitions of items required.

GNM & BSc. Nursing.

Success in 2 years

- Well oriented with Nursing flow processes.
- Confident in handling nursing responsibilities independently.

Key Performance Indicators

- Constantly strives towards personal and professional growth.
- Excellent patient & guest relations.

Organizational Relationship

<table>
<thead>
<tr>
<th>External</th>
<th>Internal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clients</td>
<td>Nursing Staff</td>
</tr>
<tr>
<td></td>
<td>Consultants/Residents</td>
</tr>
<tr>
<td></td>
<td>Ward Sec</td>
</tr>
<tr>
<td></td>
<td>Dietician</td>
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<tr>
<td></td>
<td>Other HCS</td>
</tr>
</tbody>
</table>
Job Description: Nursing Trainee

**Reporting to:** Nursing In charge

**Overall Objective:** Assist the Nursing Supervisor to deliver high quality nursing care in the hospital

### Responsibilities and key tasks
- Responsible for delivery of patient care through implementation of prescribed medication and monitoring effects.
- Responsible for coordinating nursing care for patients based on established clinical practice standards.
- Collaborate with other professional disciplines to ensure effective and efficient patient care delivery.
- Actively participate in programs for quality improvement in nursing practices.
- Responsible for ensuring personal productivity as a team and maintaining positive interpersonal relations with staff.
- Promote a safe environment for patients, visitors and coworkers including the implementation of infection control policies of the hospital.
- To be responsible for check on inventory maintained at each floor.
- To work in co-ordination with ward sec., Consultants, Housekeeping, Nursing Incharge.
- To be responsible to send the indent signed by them

### Most Important Demands

**Core Competencies**
- Service Excellence
- Team Player
- Technical Competencies
- Reasonable content knowledge with good conceptual knowledge.

**Behavioral/Leadership Competencies**
- Good knowledge of principles and practices of nursing.
- An inquiring approach towards patient care.
- Communication skills.
- Education/Experience
- Should have minimum ANM, GNM & BSc. Nursing.
### Success in 2 years
- Well oriented with Nursing flow processes.
- Confident in handling nursing responsibilities independently

### Key Performance Indicators
- Constantly strives towards personal and professional growth.
- Excellent patient & guest relations.

<table>
<thead>
<tr>
<th>Organizational Relationship</th>
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<td></td>
<td>Dietician</td>
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<td>HCS</td>
</tr>
</tbody>
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Transliteration: UPHSSP
### General Instructions for Nurses

#### 1. Discipline

<table>
<thead>
<tr>
<th>DO’s</th>
<th>DON’Ts</th>
</tr>
</thead>
</table>
| - Attend duty in proper uniform within 10 minutes before reporting time  
- Always display Identity Card.  
- Take over inventory articles by counting each item.  
- Take over each patient from previous staff with minute details. | - Come late for duty  
- Use nail polish, have long nails or wear extra ornaments.  
- Accept gifts/ money from patients/attendants.  
- Keep mobile phones on silent mode while on duty. |

#### 2. Orientation to patients and their attendants at the time of admission.

<table>
<thead>
<tr>
<th>DO’s</th>
<th>DON’Ts</th>
</tr>
</thead>
</table>
| - Address the patients/relatives courteously.  
- Accompany the patient to room  
- Offer the bed to patient and make him/her feel comfortable  
- Make sure nurses are always available at the time of call.  
- Inform the patients about  
  a. Visiting hours and regulations  
  b. Timings of hot water availability  
  c. Timings of air conditioning (cold & hot)  
  d. Location of the pharmacy to get medications.  
  e. Location of drinking water  
  f. Provision of water supply  
  g. Food timings.  
  h. Availability of barber in day time.  
- Remove ornaments & valuables in the presence of a relative  
- Note down the name and number of each item on the back of “Admission & Discharge Paper”  
- Get the name, signature and the relationship of the receiver. | - |


3. Courtesy

<table>
<thead>
<tr>
<th><strong>DO’s</strong></th>
<th><strong>DON’Ts</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Be polite and courteous to the patients/attendants/visitors.</td>
<td>• Talk improperly/ rudely to the patients/attendants</td>
</tr>
<tr>
<td>• Attend to the patient on one call.</td>
<td>• Argue with patients/attendants/Visitors/Co-workers/Supervisors</td>
</tr>
<tr>
<td></td>
<td>• Ignore any problem mentioned by the patient/attendants</td>
</tr>
<tr>
<td></td>
<td>• Allow smoking or drinking in the premises</td>
</tr>
<tr>
<td></td>
<td>• Allow eatables and flowers into the hospital.</td>
</tr>
<tr>
<td></td>
<td>• Engage in lengthy talks over telephone.</td>
</tr>
</tbody>
</table>

4. Procedures /Investigations

<table>
<thead>
<tr>
<th><strong>DO’s</strong></th>
<th><strong>DON’Ts</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>• Send patients to other departments or for investigations with Ward attendants only.</td>
<td>• Allow valuables and money with the patient</td>
</tr>
<tr>
<td>• Send the blood sample to Blood Bank through ward attendant (along with a relative)</td>
<td>• Allow attendants to sit or sleep on patient’s bed</td>
</tr>
<tr>
<td>• Collect blood from Blood Bank through ward attendant.</td>
<td>• Allow the patient to leave hospital without written permission from the doctor</td>
</tr>
<tr>
<td>• Start blood transfusion with the knowledge of patient/relative only.</td>
<td>• Leave the medical record in patient’s room/bed</td>
</tr>
<tr>
<td>• Switch off electrical appliances when not in use (geysers, needle destroyers, hot plates, fans, refrigerators etc.)</td>
<td>• Allow the patient/attendants to carry the medical record to any place.</td>
</tr>
<tr>
<td>• Always lock vacant rooms after getting thoroughly cleaned.</td>
<td>• Filling of investigation forms by nursing staff</td>
</tr>
<tr>
<td></td>
<td>• Send the patients without rails or cover sheets/blankets</td>
</tr>
<tr>
<td></td>
<td>• Allow the Ward attendant &amp; Sanitary Attendants to leave the ward/department without information.</td>
</tr>
<tr>
<td></td>
<td>• Allow the Ward attendant &amp; Sanitary Attendants to leave the ward/department before handing over the responsibility to next shift person.</td>
</tr>
</tbody>
</table>
5. Medicines & I.V. Fluids

<table>
<thead>
<tr>
<th>DO’s</th>
<th>DON’Ts</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Start medications immediately after admission/orders</td>
<td>• Record before giving medicine/injections</td>
</tr>
<tr>
<td>• Remember 6 “R” before administering any medication</td>
<td></td>
</tr>
<tr>
<td>a. Right Drugs</td>
<td></td>
</tr>
<tr>
<td>b. Right Dose</td>
<td></td>
</tr>
<tr>
<td>c. Right Route</td>
<td></td>
</tr>
<tr>
<td>d. Right Time</td>
<td></td>
</tr>
<tr>
<td>e. Right Patient</td>
<td></td>
</tr>
<tr>
<td>f. Right Documentation</td>
<td></td>
</tr>
<tr>
<td>• Make sure the patient takes the medicine in your presence</td>
<td></td>
</tr>
<tr>
<td>• Check blood sugar before the food reaches the patient.</td>
<td></td>
</tr>
<tr>
<td>• Give insulin injection before relative/patient reminds you</td>
<td></td>
</tr>
<tr>
<td>• Make a loop and fix the I.V. tube – prevent cannula from coming out.</td>
<td></td>
</tr>
<tr>
<td>• Put date to I.V. Cannula site, I.V. tubings, urinary catheters, Ryles Tubes etc.</td>
<td></td>
</tr>
<tr>
<td>• Regular care of I.V. sites always (after removing cannula also)</td>
<td></td>
</tr>
<tr>
<td>• Procure medicines speedily from pharmacy</td>
<td></td>
</tr>
<tr>
<td>• Check the balance of medicines before indenting</td>
<td></td>
</tr>
<tr>
<td>• Inform Nursing Matron/Consultant –in-charge on the spot about medicines not available.</td>
<td></td>
</tr>
<tr>
<td>• Check portable O2 Cylinders in each shift, note down reading in register.</td>
<td></td>
</tr>
<tr>
<td>• Ensure enough water in O2 humidifiers.</td>
<td></td>
</tr>
</tbody>
</table>

6. Infection Control/ Waste Management

<table>
<thead>
<tr>
<th>DO’s</th>
<th>DON’Ts</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Hand wash in between procedures to avoid spread of infection.</td>
<td>• Wear ICCU/ Cath Lab/ OT dress/ slippers out of the department</td>
</tr>
<tr>
<td>• Ensure waste segregation, cutting the tips of syringes, cutting tubing after each use and keep them in 1:9 Sodium hypochlorite solutions.</td>
<td>• Keep infected dressing materials in dressing trolley</td>
</tr>
<tr>
<td>• Change Sodium hypochlorite solution in every shift</td>
<td>• Keep sterile gauze drum for more than 24 hours.</td>
</tr>
<tr>
<td>• Use color coded bags after proper segregation of the waste</td>
<td>• Keep the CSSD items for more than 48 hours.</td>
</tr>
<tr>
<td>• Prick more than once during venepuncture</td>
<td>• Prick more than once during venepuncture</td>
</tr>
</tbody>
</table>
### 7. Discharge Process

<table>
<thead>
<tr>
<th>DO’s</th>
<th>DON’Ts</th>
</tr>
</thead>
</table>
| • Remove I.V. cannula at the time of discharge  
• Send the file with discharge summary to accounts office with the ward attendant accompanied by the relative of the patient  
• Check the payment receipt number from accounts section before releasing patients (for paying patients only)  
• Hand over the discharge summary, master chart to patients/relatives with instructions  
• Send the patient on wheel chair up to the entrance with the Ward attendant | • Touch the area of I.V. site after cleaning and before inserting the cannula  
• Take more than 3 hours for discharge process |

- Keep infected waste in yellow bag only
- Ensure cleaning of suction jars after every use.
- Ensure barrier nursing universal precautions to infectious patients.
- Ensure carbolising the beds and the unit after a patient is discharged to keep the room ready for next patient.

- Touch the area of I.V. site after cleaning and before inserting the cannula.
1. General Nursing

1.1 NURSING ASSESSMENT

Nursing assessment is the first step in the nursing. Assessment is a systematic and continuous process which involves:

- Collection
- Organization
- Validation
- Documentation of data.

The nurse gathers information to identify the health status of the patient. Assessments are made initially and continuously throughout patient care. The remaining phases of the nursing process depend on the validity and completeness of the initial data collection.

**Purpose**

Assessment is part of each activity the nurse does for and with the patient. The purposes is

- To validate a diagnosis
- To provide basis for effective nursing care.
- It helps in effective decision making
- Basis for accurate diagnosis
- It promote holistic nursing care.

**Types of Assessment**

- Initial
- Focus
- Time-lapsed
- Emergency Assessment

**Initial comprehensive assessment**: An initial assessment, also called an admission assessment, is performed when the client enters a health care from a health care agency. The purposes are to evaluate the client’s health status, to identify functional health patterns that are problematic, and to
provide an in-depth, comprehensive database, which is critical for evaluating changes in the client’s health status in subsequent assessments.

Problem-focused assessment: A problem focus assessment collects data about a problem that has already been identified. This type of assessment has a narrower scope and a shorter time frame than the initial assessment. In focus assessments, nurse determine whether the problems still exists and whether the status of the problem has changed (i.e. improved, worsened, or resolved). This assessment also includes the appraisal of any new, overlooked, or misdiagnosed problems. In intensive care units, may perform focus assessment every few minute.

Emergency assessment: Emergency assessment takes place in life-threatening situations in which the preservation of life is the top priority. Time is of the essence rapid identification of and intervention for the client’s health problems. Often the client’s difficulties involve airway, breathing and circulatory problems (the ABCs). Abrupt changes in self-concept (suicidal thoughts) or roles or relationships (social conflict leading to violent acts) can also initiate an emergency. Emergency assessment focuses on few essential health patterns and is not comprehensive.

Time-lapsed assessment or Ongoing assessment: Time lapsed reassessment, another type of assessment, takes place after the initial assessment to evaluate any changes in the clients functional health. Nurses perform time-lapsed reassessment when substantial periods of time have elapsed between assessments (e.g., periodic output patient clinic visits, home health visits, health and development screenings)

STEPS OF ASSESSMENT:
- Collection of data (Subjective data and Objective).
- Validation of data
- Organization of data
- Recording/documentation of data

Collection of data: gathering of information about the client which
- Includes physical, psychological, emotion, socio-cultural, spiritual factors that may affect client’s health status
- Includes past health history of client (allergies, past surgeries, chronic diseases, use of folk healing methods)
- Includes current/present problems of client (pain, nausea, sleep pattern, religious practices, medication or treatment the client is taking now)
- Types of data: When performing an assessment the nurse gathers subjective and objective data.
  - **Subjective data (symptoms or covert data):** are the verbal statements provided by the Patient. Statements about nausea and descriptions of pain and fatigue are examples of subjective data.
Objective data (signs or overt data): are detectable by an observer or can be measured or tested against an accepted standard. They can be seen, heard, felt, or smelt, and they are obtained by observation or physical examination. For example: discoloration of the skin

Data collection methods:

- Observing: to observe is to gather data by using the senses.
- Interviewing: an interview is a planned communication or conversation with a purpose.
- Examining: Performance of a physical examination. The physical examination is often guided by data provided by the patient. A head-to-toe approach is frequently used to provide systematic approach that helps to avoid omitting important data

Purposes of data validation:

- Ensure that data collection is complete
- Ensure that objective and subjective data agree
- Obtain additional data that may have been overlooked
- Avoid jumping to conclusion
- Differentiate cues and inferences

Data Requiring Validation

- Discrepancies or gaps between what the client says at one time and then another time
- Findings those are very abnormal and inconsistent with other findings.

Methods of validation

- Recheck your own data through a repeat assessment..
- Clarify data with the client by asking additional questions
1.2 Blood Pressure Technique

Purpose
To measure arterial blood pressure, both systolic and diastolic.

Equipment Required
- For general ward checking of blood pressure: Sphygmomanometer & Stethoscope
- For checking of the blood pressure in the High Dependency Unit or Intensive Care Unit:
  i. Non-invasive blood pressure equipment sensitive to brachial pulsation (for intermittent blood pressure monitoring).
  ii. Invasive direct arterial monitoring for continuous blood pressure observation
- Spirit swab to clean earpiece of stethoscope before and after used by different users.

Procedure
- Completely deflate cuff
- Apply cuff snugly and evenly around arm. Ensure cuff size is 2/3 the length of the upper shaft and length is long enough to wrap round the arm.
- Connect rubber tubing attached to cuff to instrument
- Find the pulsation of the brachial artery and place the stethoscope exactly over this point
- Inflate the cuff until thumping sounds are heard
- Continue compression until these sounds disappear
- Allow mercury column to fall a few millimeters until a faint thumping sound is heard – This is the Systolic Pressure.
- Continue to deflate cuff until sound changes from a loud to a soft thumping – This is the Diastolic Pressure
- It may be necessary to repeat this procedure
- If so: Deflate cuff fully before re-inflating it
- Check blood circulation.
1.3 Care of Pressure Area

Purpose

To clean and turn patients position turning 2 hourly, to increase blood circulation to the pressure areas & to prevent occurrence of pressure

Procedure

a.  Greet patient by name
b.  Assess patient and explain procedure to patient, the need to change his/her position
c.  Change linen as required and remake bed, ensuring bed linen is crease free.
d.  Report condition of patient’s skin to staff Nurse in charge.
e.  Record in nursing progress note.
1.4 Insertion of Nasogastric Tube

Purpose

To ensure that patient maintains adequate nutrition / medication via a nasogastric tube.

Items Required

- Trolley
- Gloves
- Warm water
- Nasogastric tube
- Lubricant
- Tape
- Receiver
- Blue litmus paper
- Glass of water
- 20ml syringe for aspiration

Procedure

- Explain the procedure
- Position patient in the semi-up right position supporting the head with pillows
- Wash hands
- Assemble equipment
- Measure/follow markings for the length of the tube required.
- Mark this point on the tube with a piece of tape.
- Lubricate the catheter
- Insert the tube to required length
- Check that it is in place by withdrawing small amount of gastric aspirate using a syringe or can use stethoscope for bubbling sounds in epigastrum.
1.5 Insertion of Suppositories

Purpose
To assist patients with evacuation of bowels & to administer drug into the rectum.

Equipment
- Tray
- Prescribed suppository
- Under pad
- Gloves
- Lubricant e.g. Vaseline
- Disposal bag
- Toilet paper
- Covered bedpan

Procedure
- Wash hand
- Gather above equipment
- Check suppository label against treatment sheet
- Take tray to patient’s room. Greet patient by name
- Check I.D. against treatment sheet
- Screen bed to ensure privacy
- Place patient on left lateral position and expose required part place under pad underneath patient
- Wear gloves
- Remove suppository from wrapper. Discard wrapper into disposal bag
- Lubricate suppository
- Part the buttocks and insert suppository into rectal canal beyond the anal spinster (approximately 2 ½ - 3 inches)
- Instruct patient to perform deep breathing exercises during insertion
- Instruct patient to lie quietly in bed for 15-20 minutes while medicine is absorbed
- Clean anal region with tissue paper.
- Ensure patient to use call bell for any need / assistance
- Discard paper bag and clean tray prior to storage
- Return after 15-20 minutes to check the patient. Offer bedpan or assist to toilet
1.6 Oral Care

Oral care includes the care of oral including Teeth, Gums, Lips and Cheeks. The main purpose of oral care is

- To give a feeling of freshness
- To prevent infection
- To give a sense of well-being
- For aesthetic sense
- To maintain cleanliness
- To prevent bad odour
- To stimulate appetite.

General Article required are a tray containing

<table>
<thead>
<tr>
<th>Small mackintosh and towel</th>
<th>Solution for mouth wash</th>
</tr>
</thead>
<tbody>
<tr>
<td>Face towel</td>
<td>Emollient</td>
</tr>
<tr>
<td>Small jugs - 2 (one with hot water, one with cold water)</td>
<td>Swab sticks in a bottle</td>
</tr>
<tr>
<td>Feeding cup/glass</td>
<td>Mouth gag (in case of unconscious patient)</td>
</tr>
<tr>
<td>Artery forceps - 1</td>
<td>Tongue depressor (in case of unconscious patient)</td>
</tr>
<tr>
<td>Dissecting forceps - 1</td>
<td>A bowl with clean water</td>
</tr>
<tr>
<td>Gauze pieces (in a bowl)</td>
<td>Kidney tray and paper bag</td>
</tr>
<tr>
<td>Dentifrice (in container)</td>
<td>Screen for privacy</td>
</tr>
</tbody>
</table>

Procedure 1 (For the patient who is able to care for himself)

- Explain the procedure to the patient.
- Provide privacy
- Give a comfortable position to the patient (sitting or Fowler’s position with cardiac table in front or lateral with face at the edge of pillow)
- Place the mackintosh and face towel across the chest (if patient is sitting / on the pillow if patient is in lateral position)
- Place kidney tray close to the cheek
- Remove dentures and place in a bowl of clean water
- Arrange the articles.
- Wash hands.
- Prepare the mouth wash by mixing hot and cold water and one crystal of KMnO4
- Help the patient to rinse his mouth.
- Let the patient hold kidney tray as per his convenience for return flow.
- Pick up the tooth brush, wet it with water, spread tooth paste on it and hand it over to the patient.
- Instruct the patient to brush all sides of the teeth extending from the gum to the enamel.
- Pour water on brush, holding it over kidney tray and clean brush thoroughly and put back the brush.
• Help the patient to rinse his mouth thoroughly
• Help the patient to wash his face and hands. Wipe with the towel

Procedure 2 (For an unconscious patient)

• Explain procedure to patient’s attendant (if present)
• Provide privacy
• Place patient in lateral position with face at edge at end of pillow
• Place the mackintosh and face towel on the pillow
• Arrange the articles.
• Wash hands.
• Prepare the mouth wash by mixing hot and cold water and one crystal of KMnO4
• Make a paste with Soda bicarbonate or salt or any available dentifrice.
• Place the kidney tray close to the cheek.
• Take a gauze piece; wrap it around artery forceps, covering the tips completely.
• Moisten the gauze and dip it in the cleansing agent. Swab each tooth gently but firmly cleaning all sides of the teeth. The used gauze can be removed from artery forceps with the help of a dissecting forceps.
• To clean the inner and chewing surface of teeth, use a mouth gag to help the mouth open.
• With mouth gag in position, clean the tongue using the gauze covered artery forceps.
• Wipe the face with towel.
• Apply Boro- glycerine on lips and tongue with swab sticks.
• Remove the kidney tray, mackintosh and towel.
• Make the patient comfortable, tidy up the unit.
• Discard the wastes and clean the articles with soap and water. Boil the forceps.
• Wash hands.
• Record the time, solution used for mouth cleaning and condition of the mouth on the nurse’s record.
Common dentifrices uses are:

<table>
<thead>
<tr>
<th>Tooth powder</th>
<th>Neem stick</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glycerin with lime juice</td>
<td>Sodium, bicarbonate paste</td>
</tr>
</tbody>
</table>

Common mouthwashes solutions are:

<table>
<thead>
<tr>
<th>Potassium permanganate (1:5000)</th>
<th>Normal saline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrogenperoxide (1:8)</td>
<td>Sodium chloride (1 tablespoon to a pint of water)</td>
</tr>
</tbody>
</table>

Common emollients used are

<table>
<thead>
<tr>
<th>Boro-glycerine</th>
<th>Body Cream</th>
</tr>
</thead>
<tbody>
<tr>
<td>Olive oil</td>
<td>Liquid paraffin</td>
</tr>
<tr>
<td>White Vaseline</td>
<td></td>
</tr>
</tbody>
</table>
1.7 BED / SPONGE BATH

**Definition:** Sponge bath is defined as bathing a patient who is confined to bed and who does not have the physical and mental capability of self-bathing.

**Purpose**

- To make the patient comfortable and fresh.
- To improve circulation.
- To observe skin for redness, injuries, swelling, rashes or other infections and bony prominences for bed sores.
- To prevent pressure sores

**Articles Required For Sponge Bath**

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>A screen, bath blanket for privacy or top sheet</td>
<td></td>
</tr>
<tr>
<td>Wash / Sponge cloths</td>
<td>2</td>
</tr>
<tr>
<td>Bath towel</td>
<td>2</td>
</tr>
<tr>
<td>Face towel</td>
<td>1</td>
</tr>
<tr>
<td>A new set of clothing</td>
<td></td>
</tr>
<tr>
<td>Contains of hot and cold water</td>
<td></td>
</tr>
<tr>
<td>Bath basin</td>
<td></td>
</tr>
<tr>
<td>A tray containing soap, methylated spirit, talcum powder, hair oil, comb, nail cutter, kidney tray, paper bag, duster to clean to locker</td>
<td></td>
</tr>
<tr>
<td>Laundry bag</td>
<td></td>
</tr>
</tbody>
</table>

**Procedure**

- Assemble all the articles at bedsides.
- Patient is to be asked to pass urine before beginning the procedure.
- Explain the procedure to the patient, if conscious.
- Screen the patient.
- Cover the patient with top sheet. Fanfold other top clothes at foot end.
- Mix cold and hot water in basin from containers and check the temperature on the back of your hand. (Already mixed warm water can also be brought in a basin).
- Remove clothing and put in laundry bag.
- Place the towel on chest of the patient or under the head.
  - Fold the sponge cloth in your hand to make a mitten, wet it, and apply soap on it and clean face, neck, behind the ears thoroughly.
  - Rinse, sponge cloth and clean face with fresh water and dry face, neck etc. with face towel.
  - Expose farther hand, spread bath towel underneath, fold sponge cloth around hand, wet, apply soap and clean hand, axilla, thoroughly using long, firm strokes from distal to proximal end.
- Wipe with plain water and dry. (Patient’s hands can be immersed in basin for 3-5 minutes).
- Repeat the same on other arm.
- Expose patient up to waist, spread towel on chest, clean chest thoroughly with soap and then water from under the bath towel dry and cover again with top sheet.
- Expose patient up to pubic region, place bath towel over chest and abdomen, wash, rinse and dry abdomen lifting edge of the bath towel, in side to side strokes.
- Turn the patient towards your side. Spread bath towel under back, expose back and clean with soap and fresh water in circular motion and dry with bath towel.
- Massage back with a spirit in circular motion, apply talcum powder.
- Expose farther leg, spread bath towel under the leg, flex the knee clean with soap and water using long, firm strokes, dry and cover (foot can be allowed to soak while you wash leg).
- Do the same on other leg.
- Clean private parts in same way or ask patient to do it himself/ herself.
- Put on clean clothes, comb hair, cut nails.
- Remove bath blanket, cover with top cloths.
- Remove and replace articles.
- Leave patient comfortable and unit tidy.
- Record if any abnormal changes have been observed in skin and bring it to the notice of ward sister.
**NURSING PROTOCOL: CHECKLIST FOR BED / SPONGE BATH**

**Patient’s Name:** ________________________
**I.P. No.** ________________________
**Ward** ____________

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Checklist</th>
<th>Yes</th>
<th>No</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Assemble all the articles at bedside.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Patient should empty bowel and bladder before beginning the procedure.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Explain the procedure to the patient, if conscious</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Screen the patient.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>Cover the patient with top sheet. Fanfold other top clothes at foot end.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Mix cold and hot water in basin from containers and check the temperature on the back of your hand. (Already mixed warm water can also be brought in a basin).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Remove clothing and put in laundry bag.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Place the towel on chest of the patient or under the head.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Fold the sponge cloth in your hand to make a mitten, wet it, and apply soap on it and clean face, neck, behind the ears thoroughly.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Rinse, sponge cloth and clean face with fresh water and dry face, neck etc. with face towel.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Expose farther arm, spread bath towel underneath, fold sponge cloth around hand, wet, apply soap and clean hand, axilla, thoroughly using long, firm stokes from distal to proximal end.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Wipe with clean with water and dry. (Patient’s hands can be immersed in basin for 3-5 minutes).</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13.</td>
<td>Repeat the same on other arm.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>14.</td>
<td>Expose patient upto waist, spread towel on chest, clean chest thoroughly with soap and then water from under the bath towel dry and cover again with top sheet.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15.</td>
<td>Expose patient upto pubic region, place bath towel over chest and abdomen, wash, rinse and dry abdomen lifting edge of the bath towel, in side to side strokes.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16.</td>
<td>Turn the patient towards your side. Spread bath towel under back, expose back and clean with soap and fresh water in circular motion and dry with bath towel.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
17. Massage back with a spirit in circular motion, apply talcum powder.

18. Expose farther leg, spread bath towel under the leg, flex the knee clean with soap and water using long, firm strokes, dry and cover (foot can be allowed to soak while you wash leg).

19. Do the same on other leg.

20. Clean the private part in same way or ask patient to do it herself.

21. Put on clean clothes, comb hair, cut nails.

22. Remove bath blanket, cover with top clothes.

23. Remove and replace articles.

24. Leave patient comfortable and unit tidy.

25. Record if any abnormal changes have been observed in skin and bring it to the notice of ward sister.

Name:

Signature:

Date:
1.8 Back Care

1. Objectives of Purposes

Back care is given to -

- Cleanse the skin
- Promote circulation by stimulating the skin’s nerve endings and underlying tissues.
- Help relax a restless person.
- Help to prevent bedsore and keep the skin intact.
- Dilate superficial arterioles, which bring more blood and nourishment to the skin.
- Eliminate waste products from the body through the skin.
- Promote comfort through muscle relaxation and skin stimulation.
- Give the nurse an excellent opportunity to strengthen the nurse-patient relationship.

2. General Instructions:

- Check the physician’s orders to see the specific precautions if any, regarding positioning and movement of patient.
- Assess the patient’s need for back care.
- Assess the patient’s mental state to cooperate and to follow directions.
- Assess the cardiac respiratory functioning. Check T.P.R. and B.P.
- Check the patient’s preference for soap, powder etc.

3. The articles required are:

<table>
<thead>
<tr>
<th>Item</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bath basin</td>
<td>-1</td>
</tr>
<tr>
<td>Methylated spirit and powder</td>
<td></td>
</tr>
<tr>
<td>Small bowl</td>
<td>-1</td>
</tr>
<tr>
<td>Kidney tray and paper bag</td>
<td></td>
</tr>
<tr>
<td>Soap with soap dish</td>
<td>Jug -2</td>
</tr>
<tr>
<td>Wash clothes</td>
<td>-2</td>
</tr>
<tr>
<td>Bucket - 1</td>
<td></td>
</tr>
<tr>
<td>Bath towels</td>
<td>-2</td>
</tr>
<tr>
<td>Clean linen</td>
<td></td>
</tr>
<tr>
<td>Bath blanket on sheet</td>
<td>Laundry bag</td>
</tr>
</tbody>
</table>

4. Preparation of patient and unit

- Explain the procedure to the patient.
- Remove unnecessary items from the work area and place the articles needed conveniently on the bedside table.
- Bring the patient to the edge of the bed and towards the nurse to prevent overreaching.
- Check the room temperature and warm it if necessary.
- Close the windows if necessary and put off the fan to prevent draughts.
- Provide privacy by means of curtains.
- Remove the top bed linen on fan – fold them to the foot end of the bed, leaving a sheet or bath blanket over the patient. Keep it free at the foot end to allow freedom for the legs.
- Keep patient in prone or side lying patient according to the patient’s condition.
- Remove the personal clothing and cover the patient with the bath blanket.
5. **Procedure**

- Wash hands.
- Mix hot and cold water in the basin and check the temperature on the back of the hand. Fill the basin half full.
- Assist the patient to turn to a prone or side-lying position. Position the bath blanket and towel to expose only the back till buttocks with the face away from the nurse. Make sure that the patient will not fall.
- Fold back the bath blanket from the shoulder to the thighs and tuck the edges secularly around the thighs. Place the towel over the bed, close to the back, lengthwise.
- Wash, rinse and dry the patient’s back from the shoulders to the buttocks with brisk circular movements.
- After drying the back give a though back rub in circular motion with methylated spirit and powder.
- Pay particular attention to the pressure points and cleansing between gluteal folds.
- And observe for any indication of redness or skin breakdown in the sacral area.
- Put on the clean gown / patient clothes.
- Wash hands.
- Record the observations on the Nurse’s Daily Record with date and time.

6. **After care of the patient and articles**

- Replace the patient’s personal clothing.
- Straighten the bed linen.
- Remove the bath blanket and put it for washing.
- Change the bed linen if needed.
- Position the patient for comfort and proper alignment.
- Take all articles to the utility room. Disinfect the bath basin and the wash clothes. Send the soled linen to the laundry.
- Put back all the articles in the proper places after cleaning. Personal articles are replaced into the bedside table.
- Take the opportunity to teach the patient on his relatives about the personal hygiene
- Wash hands
- Record the observation in the nurse’s daily notes with date, time, and condition of skin like redness, breaking skin, etc.
### NURSING PROTOCOL : CHECKLIST FOR BACK CARE

**Patient’s Name:** __________________________

**I.P. No.:** ________________________

**Ward/Unit:** __________

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Check List</th>
<th>Yes</th>
<th>No</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Preparation of patient and unit</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(a) Explain the procedure to the patient.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(b) Remove unnecessary items from the work area and place the articles needed conveniently on the bedside table.</td>
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<td></td>
<td>(c) Bring the patient to the edge of the bed and towards the nurse to prevent overreaching.</td>
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<td></td>
<td>(d) Check the room temperature and warm it if necessary.</td>
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<tr>
<td></td>
<td>(e) Close the windows if necessary and put off the fan to prevent draughts.</td>
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<tr>
<td></td>
<td>(f) Provide privacy by means of curtains.</td>
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<tr>
<td></td>
<td>(g) Remove the top bed linen or fan – fold them to the foot end of the bed, leaving a sheet or bath blanket over the patient. Keep it free at the foot end to allow freedom for the legs.</td>
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<tr>
<td></td>
<td>(h) Keep patient prone or on side according to the patient’s condition.</td>
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<tr>
<td></td>
<td>(j) Remove the personal clothing and cover the patient with the bath blanket.</td>
<td></td>
<td></td>
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<tr>
<td>2</td>
<td>Procedure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(a) Wash hands.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) Mix hot and cold water in the basin and check the</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>temperature on the back of the hand. Fill the basin half full.</td>
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<tr>
<td>------------------------------------------------------------------</td>
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<td></td>
</tr>
<tr>
<td>(c) Assist the patient to turn to a prone or side-lying position. Position the bath blanket and towel to expose only the back till buttocks with the face away from the nurse. Make sure that the patient will not fall.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(d) Fold back the bath blanket from the shoulder to the thighs and tuck the edges secularly around the thighs. Place the towel over the bed, close to the back, lengthwise.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(e) Wash, rinse and dry the patient’s back from the shoulders to the buttocks with brisk circular movements.</td>
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<td></td>
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</tr>
<tr>
<td>(f) After drying the back give a thorough back rub with methylated spirit and powder.</td>
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<tr>
<td>(g) Pay particular attention to the pressure points and cleansing between gluteal folds.</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(h) Put on the clean gown / patient clothes.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(j) Wash hands.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(k) Record the observations on the Nurse’s Daily Record with date and time.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3 After care of the patient and articles

<p>| (a) Replace the patient’s personal clothing. |
| (b) Straighten the bed linen. |
| (c) Remove the bath blanket and put it for washing. |
| (d) Change the bed linen if needed. |
| (e) Position the patient for comfort and proper alignment. |</p>
<table>
<thead>
<tr>
<th>(f)</th>
<th>Take all articles to the utility room. Disinfect the bath basin and the wash clothes. Send the soled linen to the laundry.</th>
</tr>
</thead>
<tbody>
<tr>
<td>(g)</td>
<td>Put back all the articles in the proper places after cleaning. Personal articles are replaced into the bedside table.</td>
</tr>
<tr>
<td>(h)</td>
<td>Take the opportunity to teach the patient on his relatives about the personal hygiene.</td>
</tr>
</tbody>
</table>

Name:

Signature:

Date:
1.9 ORAL MEDICATION

1. Definition
To administer drugs by oral route (mouth).

2. Purposes
- For therapeutic & symptomatic treatment of diseases.
- For prophylactic measures.
- For building up general health & supplementing diet.

3. General Instructions
- Always give medicines from a written order signed by doctor.
- Medicine bottle should be clearly labeled. Never give medicine from unlabelled bottles. Never give expired medicines.
- Don’t keep labeled poison drugs on the medicine trolley.
- Never give medicine on empty stomach unless ordered.
- Medications should not be mixed with large quantities of food (e.g. milk).
- Keep 6 R’s in mind, i.e. right patient, right time, right drug, right dose, right route and right documentation.
- The nurse should know about each medication. She is administering, common usage & dosages) contraindications, side effects & toxic effects.
- Always check the label of medicine thrice before taking out from the bottle i.e. before pouring out in the glass, before administering and before replacing the bottle.
- Pour liquid medicine away from label to avoid spilling on the label.
- Never give the medicine, which is prepared by others.
- Record the time of the medicine given & put the signature.
- Ensure that patient takes medicine in front of you before you leave him.
- Don’t handle tablets, pills & capsules with bare hands.
- If any time, one dose is missed by the patient due to some investigation etc., don’t give the missed dose without consulting the doctor.
4. Articles Required

<table>
<thead>
<tr>
<th>A tray containing</th>
<th>Containers for keeping tablets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ounce glass</td>
<td>Medicine cards</td>
</tr>
<tr>
<td>Water in a glass</td>
<td>Paper bag</td>
</tr>
<tr>
<td>Small towel/ big incase of children, droppers/syringe.</td>
<td></td>
</tr>
</tbody>
</table>

5. Procedures

- Wash hands
- Set up the tray.
- Check the orders twice in the medicine book.
- Go and take out the required medicines after checking the medicine card & rechecking the label of the container, dosage, expiry date once again before you keep back the bottle in place.
- For liquids, shake the bottle well before pouring.
  - Remove the lid, hold the medicine in the right hand & check the label again.
  - Hold the medicine glass in your left hand at eye level.
  - Pour the exact amount of medicine in the medicine glass, keeping away from the label.
  - Wipe the mouth of the bottle, check the label once again & replace the bottle.
- Carry the tray with medicine card to the patient.
- Call the patient by name to check that you are giving medicines to the right patient; explain the procedure to the patient.
- Give the medicine to the patient one by one with water.
- Record the time, dosage, and medicine on the nurse’s notes with signature.
- Keep all the articles after washing (glasses, containers etc.) dry & replace.
NURSING PROTOCOL: CHECKLIST FOR ORAL MEDICATION

Patient’s Name:________________________

I.P. No.___________________

Ward/Unit:__________

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Check List</th>
<th>Yes</th>
<th>No</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Washes hands</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Sets up the tray.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Checks the orders twice in the medicine book &amp; write down the order in the medicine card.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Takes out the required medicines after checking the medicine card &amp; rechecking the label of the container, dosage, expiry date once again before keeping back the bottle in place.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5.</td>
<td>For liquids, shakes the bottle well before pouring.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Removes the lid, holds the medicine in the right hand &amp; checks the label again.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Holds the medicine glass in left hand at eye level.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Pours the exact amount of medicine in the medicine glass, keeping away from the label.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>- Wipes the mouth of the bottle, checks the label once again &amp; replaces the bottle.</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>6.</td>
<td>Carries the tray with medicine card to the patient.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Calls the patient by name to check the right patient, explains the procedure to the patient.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Gives the medicine to the patient one by one with water.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>Records the time, dosage, and medicine on the nurse’s notes with signature.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Keeps all the articles after washing (glasses, containers etc.), dries &amp; replaces.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Name:________________________

Signature:____________________

Date:_________________________
1.10 Intramuscular Injection

1. Definition

It is the introduction of fluid medication in the muscle tissue of the body.

2. Purpose

- To obtain a rapid systematic effect of the drug.
- To administer the drug when it can’t be given orally.
- To administer large quantity of solution (2 to 10 ml)
- To prevent the irritation of the lining of the digestive tract by irritating drugs.
- To list the patient’s sensitivity to drugs.
- To prevent the drug from being destroyed or rendered ineffectual by the action of digestive juices.

3. General Instructions

- Check the prescription of the physician before administering injection.
- Check for expiry of the drug.
- Read the label and check the strength of the medication.
- Use sharp needle with appropriate size to avoid undue discomfort.
- Keep 2 needles- One for drawing fluid from vial / ampoule & one for administering medication.
- Be sure that patient is not sensitive to drug.
- Administer drug by following 5 “R”-, right drug, right route, right patient, right dose & right time.
- Select the right needle for thin & obese patients.
- Don’t use any drug which is discolored or has sediments.
- Alternate the site of injection each time to prevent irritation & allowing complete absorption.
- All the prepared injections (prefilled Injections) and I.V drips must be labeled with date of preparation and name of the drug.

4. Sites for injection

- Dorso Gluteal- Upper & outer quadrant of gluteal muscle.  
- Deltoid- three finger below the acromion process
- Thighs - Vastuslateralis- lateral aspect of the thigh.
- Ventro gluteal
- Rectus femoris - Anterior aspect of the thigh.

5. Articles Required

| Disposable needles with syringes | File to break the ampoule. |
| Distil! Water to dissolve the medication | Kidney tray & paper bag |
| Sterile dissecting forceps in a jar with antiseptic solution |
6. Procedures

- Wash hands
- Set up the tray.
- Check the orders twice in the medicine book.
- Go and take out the required medicines after checking the medicine card & rechecking the label of the container, dosage, expiry date once again before you keep back the bottle in place.
- For liquids, shake the bottle well before pouring.
  - Remove the lid, hold the medicine in the right hand & check the label again.
  - Hold the medicine glass in your left hand at eye level.
  - Pour the exact amount of medicine in the medicine glass, keeping away from the label.
  - Wipe the mouth of the bottle, check the label once again & replace the bottle.
- Carry the tray with medicine card to the patient.
- Call the patient by name to check that you are giving medicines to the right patient; explain the procedure to the patient.
- Give the medicine to the patient one by one with water.
- Record the time, dosage, and medicine on the nurse’s notes with signature.
- Keep all the articles after washing (glasses, containers etc.) dry & replace.
**CHECKLIST FOR INTRAMUSCULAR INJECTION**

Patient’s Name: ____________________________

I.P. No. ________________________

Ward/Unit: ___________

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Check List</th>
<th>Yes</th>
<th>No</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Checks the medicine order with medication card.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Explains procedure to the patient.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Washes hands.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Checks label on vial or ampule.</td>
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<td></td>
<td></td>
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<tr>
<td>5.</td>
<td>Checks again the name, dose, time &amp; mode of injection from the prescription.</td>
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<tr>
<td>6.</td>
<td>Taps the ampule to bring drug down, cuts over the constricted part with file.</td>
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<tr>
<td>7.</td>
<td>Cleans the rubber cork of vial with spirit and allows to dry before inserting needle.</td>
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<tr>
<td>8.</td>
<td>Dissolves injection thoroughly.</td>
<td></td>
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<tr>
<td>9.</td>
<td>Withdraws medicine into the syringe.</td>
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<tr>
<td>10.</td>
<td>Selects the site for injection.</td>
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<td></td>
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</tr>
<tr>
<td>11.</td>
<td>Changes the needle.</td>
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<td></td>
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<tr>
<td>12.</td>
<td>Cleans the area with spirit swab.</td>
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<tr>
<td>13.</td>
<td>Stretches the muscle, at 90º angle inserts needle with quick thrust.</td>
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<td>14.</td>
<td>Withdraws plunger &amp; checks needle is not in the blood vessel.</td>
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<td>15.</td>
<td>Injects medicine slowly.</td>
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<td>16.</td>
<td>Withdraws the needle quickly &amp; massages the area gently.</td>
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<tr>
<td>17.</td>
<td>Discards the needle after destroying the tip &amp; needle into separate container.</td>
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<tr>
<td>18.</td>
<td>Makes the patient comfortable.</td>
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<tr>
<td>19.</td>
<td>Charts in the nurse’s notes.</td>
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<tr>
<td>20.</td>
<td>Observes for any reaction for 15 minutes.</td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

**AFTER CARE**

1. Replaces all the articles as soon as procedure is over.
2. Leaves the unit clean & tidy.
3. Washes hands after replacing articles.

Name: 

Signature: 

Date: 
1.11 SUBCUTANEOUS INJECTION

1. Definition

It is an introduction of medicine into subcutaneous connective tissue.

2. Purpose

- To achieve a slow absorption & action rate compared to intramuscular & intravenous injections.
- All general purposes of injection.

3. General Instruction

- Select the appropriate size No. 26 or 26 gauge needle.
- Follow instructions of I.M. injections
- Never force the needle if it is bent.
- Select hypodermic syringe, which has ml & C. C. marking for more accuracy.

4. Sites

- Anterior aspects of thigh.
- Abdominal tissue.
- Scapular area of upper back.
- Subcutaneous tissue below breast.

5. Articles required

- Same as that of I.M. Injection needles 25 & 26 gauge.
- Hypodermic / insulin syringe.

6. Procedures

- Same as for intramuscular injection.
- Grasp the area surrounding the site of the injection & hold it in a cushion fashion.
- Inject the needle quickly at 45° to 60° angle.
- Release the grasp on the tissue & inject the medication slowly.
- Make the patient comfortable.
- Chart in the nurse’s notes.

7. After care of articles

- Replace all the articles after the procedure is over.
- Leave the unit clear & tidy.
- Wash hands after replacing articles.
### NURSING PROTOCOL : CHECKLIST FOR SUBCUTANEOUS INJECTION

**Patient’s Name:**

**I.P. No.:**

**Ward/Unit:**

<table>
<thead>
<tr>
<th>S.No.</th>
<th>Check List</th>
<th>Yes</th>
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<td>2.</td>
<td>Explains procedure to the patient.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Washes hands.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Checks label on vial or ampoule.</td>
<td></td>
<td></td>
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<tr>
<td>5.</td>
<td>Checks again the name, dose, time &amp; mode of injection from the prescription.</td>
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<tr>
<td>6.</td>
<td>Taps the ampoule to bring drug down, cuts over the constricted part with file.</td>
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<td>7.</td>
<td>Cleans the rubber cork of vial with spirit and allows to dry before inserting needle.</td>
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<tr>
<td>8.</td>
<td>Withdraws medicine into the syringe.</td>
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<td>9.</td>
<td>Selects the site for injection.</td>
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<tr>
<td>10.</td>
<td>Changes the needle.</td>
<td></td>
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<tr>
<td>11.</td>
<td>Grasps the area surrounding the site of the injection &amp; holds it in a cushion fashion.</td>
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<tr>
<td>12.</td>
<td>Injects the needle quickly at 45° to 60° angle.</td>
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<tr>
<td>13.</td>
<td>Releases the grasp on the tissue &amp; injects the medication slowly.</td>
<td></td>
<td></td>
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<tr>
<td>15.</td>
<td>Charts in the nurse’s notes.</td>
<td></td>
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</tr>
</tbody>
</table>

**AFTER CARE**
1. Replaces all the articles after the procedure is over.
2. Leaves the unit clear & tidy.
3. Washes hands after replacing articles.

Name:

Signature:

Date:
1.12 ASSISTING IN INTRAVENOUS INFUSIONS

1. Definition

The introduction of a large amount of fluid and / or electrolytes and other nutrients into the body via veins.

2. Purpose

- To supply fluid & food to the tissues when patient is unable to take orally.
- To restore the volume of blood to normal in haemorrhage, burns, diarrhea & vomiting etc.
- To dilute poisons & flush the kidneys.
- To prevent & treat shock.
- To alter vascular pressure.
- To supply & meet the patient’s basic requirements of calories, water, minerals & vitamins.

3. General Instructions

- Maintain strict aseptic techniques.
- Be sure of solution’s type, strength, and amount.
- Avoid entry of air.
- Clamp before the whole amount of fluid finishes.
- Check the apparatus for working condition
- Observe the site for swelling (tissue infiltration leaking & bleeding)
- Observe the patient for unfavorable symptoms.
- Regulate the flow of fluid.
  - Drop/mt = No. of bottles X amount in 1 bottle X drops in 1ml.
    - Total time in hours X 60
- Flow and the amount depend upon condition & need of patient, disease nature of fluid.
- Fluid should be at room temperature.
- Ensure I.V. set is changed after 12-24 hrs.

4. Veins Frequently Used

- Veins of the cubital fossa
  - Median Cephalic Vein
  - Basilica Vein
- Ante brachial
- Venous network on back of the hand
- Dorsalispedis
- Saphenous veins
- Scalp vein (infants)
- Jugular vein.
5. Articles Required

<table>
<thead>
<tr>
<th>A tray Containing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gauze pieces</td>
</tr>
<tr>
<td>I.V solution</td>
</tr>
<tr>
<td>Sterile I.V. tubing with drip chamber &amp; clamp</td>
</tr>
<tr>
<td>Sterile butterfly / vein flow</td>
</tr>
<tr>
<td>Sterile syringes</td>
</tr>
<tr>
<td>Sterile cotton swabs</td>
</tr>
</tbody>
</table>

6. Procedure

- Explain the procedure to the patient
- Wash hands. Remove the bottle seal from top, clean the top with spirit swab, holding the bottle upright, insert the drip set & air vent into the bottle.
- Close the camp & hang the bottle on the I/V stand about 18’-25” high.
- Connect the needle to the IV tubing open the clamp & flush the IV fluid through the tubing & needle into kidney tray until air is expelled. Clamp the tubing again, apply protective, cap over the needle.
- Prepare few strips of adhesive tapes
- Site preparation – apply a tourniquet firmly 6 to 8’ proximal to the site.
- Encourage the patient to clench & unclench the fist rapidly lightly tap the vein with finger tip.
- Clean the area with a spirit swab.
- Physician inserts needle into the vein at 15° to 30° angle & once it enters the vein, makes it parallel with the skin & follow the cause of the vein.
- When back flow of blood occurs into the needle & tubing physician inserts the needle further up into the vein about ¾ to 1”.
- Release the tourniquet and open the clamp to let fluid flow
- Secure needle & tubing by adhesive tapes / strips.
- Immobilize with split of required.
- Record in nurse’s notes & I/O chart.
  - Time of starting infusion
  - Amount & route of flow
  - Type of fluid given
- Change the bottle whenever it finishes with prescribed IV fluid.

7. After Care

- Dispose the IV set & used cotton into the kidney tray & paper bag
- Remove I/V Stand tray from patient’s bedside
- Clean & replace all equipments to in proper place.
- Watch for edema, discoloration or haematoma formation.
- Hand over to the shift nurse.
NURSING PROTOCOL : CHECKLIST FOR ASSISTING IN INTRAVENOUS INFUSIONS

Patient’s Name _______________________

I.P. No.___________________

Ward__________

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Check List</th>
<th>Yes</th>
<th>No</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Washes hands. Removes the bottle seal from top, cleans the top with spirit swab, holding the bottle upright, inserts the drip set &amp; air vent into the bottle.</td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td>Closes the camp &amp; hangs the bottle on the I/V stand about 18”- 25” high.</td>
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<tr>
<td>3.</td>
<td>Connects the needle to the IV tubing, opens the clamp &amp; flushes the IV fluid through the tubing &amp; needle into kidney tray until air is expelled. Clamps the tubing again, applies protective, cap over the needle.</td>
<td></td>
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<tr>
<td>4.</td>
<td>Prepares few strips of adhesive tapes.</td>
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<tr>
<td>5.</td>
<td>Site preparation – applies a tourniquet firmly 6 to 8” proximal to the site.</td>
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<tr>
<td>6.</td>
<td>Encourages the patient to clench &amp; unclench the fist rapidly, lightly taps the vein with fingertip.</td>
<td></td>
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<tr>
<td>7.</td>
<td>Cleans the area with a spirit swab.</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>8.</td>
<td>Physician inserts needle into the vein at 15º to 30º angle &amp; once it enters the vein, makes it parallel with the skin &amp; follow the course of the vein.</td>
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<td></td>
<td></td>
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<tr>
<td>9.</td>
<td>When back flow of blood occurs into the needle &amp; tubing physician inserts the needle further up into the vein about ¾ to 1.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10.</td>
<td>Releases the tourniquet and opens the clamp to let fluid flow.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11.</td>
<td>Secures needle &amp; tubing by adhesive tapes / strips.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12.</td>
<td>Immobilizes with split if required.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| 13.    | Records in nurse’s notes & I/O chart.  
  - Time of starting infusion. 
  - Amount & rate of flow. 
  - Type of fluid given. |     |    |         |
| 14.    | Changes the bottle whenever it finishes with prescribed IV fluid. |     |    |         |

AFTER CARE

1. Disposes the IV set & used cotton into the kidney tray & paper bag.
2. Removes I V Stands tray from patient’s bedside.
3. Cleans & replaces all equipments in proper place.
4. Watches for edema, discoloration or haematoma formation.
5. Hands over to the shift nurse.

Name:

Signature:

Date:
1.13 STEAM INHALATION

1. Definition

It is the inhalation of moist plain or medicated vapors into the respiratory tract.

2. Purpose

- To relieve inflammation and congestion of mucous membranes of respiratory tract and para nasal sinuses
- To soften thick, tenacious mucous and help its expulsion from the respiratory tract.
- To provide heat & moisture to prevent dryness of mucous membrane of the lung and upper respiratory passage e.g. tracheostomy.
- To aid in absorption of oxygen
- To relieve spastic condition of larynx and bronchi.
- To provide antiseptic action on respiratory tract e.g. by using Tr Benzoin

3. Methods

- Jug method
- Nelson Inhaler (commonly used)
- Steam Tent
- Electrical Steam Inhaler

4. General Instructions

- Always warm the inhaler before filling with boiled water.
- Inhaler should be filled only two third with boiling water to prevent scalding and to get warm air.
- To prevent scalding of the patient, the spout of the inhaler must be placed in opposite side of the patient, so that it may not touch the skin of the patient.
- Cover the inhaler to prevent heat loss.
- Temperature of the water should be maintained between 120-160 degree Fahrenheit (54.4-76.7 degree centigrade)
- Patient should not be allowed to go into cold atmosphere for minimum 2 hours after the treatment.
- Patient should be kept in warm and drought should be prevented before, during and after the inhalation.
- A sputum mug should be placed near patient to spit during inhalation.
- The steam may be given for 15 to 20 minutes at a time.
- Fill the inhaler 2/3 as water should remain just below the spout.
- Always explain the procedure to patient.
- Always watch the patient throughout the procedure
- Place the pt in Fowler’s position.
5. **Nurses Responsibility:**

- Check the patient name, bed no. and other identifications.
- Check the patient diagnosis and the general condition of the patient.
- Check the physicians order and assess the pts ability for self care.
- Assess the level of consciousness and the ability to follow the instructions

6. **Procedure**

- Warm the inhaler by pouring a little hot water into the inhaler and emptying it.
1.14 SERVING OF MEDICATION THROUGH NASOGASTRIC TUBE

Procedure:

1. Whenever possible medication should be in liquid form. Give drugs separately, flush tube with 10mls water between each drug. Flush with water after last drug is given.
2. Keep syringes and stopper in a dry receiver. Change syringes daily. Rinse each time before use.
3. Provide frequent oral and nasal hygiene.

Continuous Nasogastric Feeding Procedure

- Check that the tube is in the position before each feed.
- **NB:** Use 20ml syringe for aspiration.
- Change giving set every 24 hours, usually at commencement of day feed.
- Flush tube with 30mls water using a 50ml syringe.
- Prior to commencement of feed.
- At the end of each feed.
- Before and after medication is given.
- Prior to use check the expiry date on the bottle of feed.
- Feed should be stored at room temperature NOT refrigerated prior to use.
- Wash hands prior to connection. Avoid unnecessary disconnection. Avoid contamination of tip of giving set or nasogastric tube.
- Use lure lock covers if disconnecting feed for any length of time. Set feed and run through giving set.
1.15 Administration of Drops

Purpose
To instill drops so that they reach to the area e.g. nose/ear/eye for improvement.

1. Equipment Required
   a. Sterile gauze or cotton.
   b. Drops as prescribed by doctors.

2. Procedure
   a. Wash hands.
   b. Explain to patient so that patient will help you while you will instill the drops.

3. Eye
   a. Clean eyes from inner to outer part.
   b. Tilt head back.
   c. Wrap child if required.
   d. Using finger gently, drawn down lower lid. Ask the patient to look up.
   e. Drop solution on the center of the lower lid.
   f. Wipe away excess or any secretions with gauze.
   g. Record it.

4. Ear
   a. Straighten ear canal by pulling auricle down and out if child is under 3 years.
   b. If above 3 years, straighten ear canal by pulling auricle up and back.
   c. Place the drops on the side of the ear canal.
   d. Wipe off excess medicine with cotton. Leave small plug of cotton in ear if ordered.
   e. Patient to lie on the unaffected side during and following instillation for 15 minutes.
   f. Record it.

5. Nose
   a. Tilt chins back and instill drops in nostril.
   b. Wrap the child if required.
   c. Maintain this position for 15 – 20 seconds if possible.
   d. Repeat for other side.
   e. Wipe mouth and nose clean.
   f. Return child to normal position of comfort.
1.16 Cleaning of Refrigerator

Purpose:

Refrigerator is to be cleaned monthly and the temperature should be maintained accordingly.

Procedure:

To clean the refrigerator the following steps are to be followed:

1. Turn OFF the fridge by disconnecting the plug from the wall socket. Allow the freezer compartment to defrost.
2. Remove all items from refrigerator and transfer them to another refrigerator or icebox.
3. Remove ice from the freezer if accumulated.
4. Wash all surfaces with warm soapy water including. Rinse and dry.
5. Replace all shelves and trays.
6. Wash the exterior surfaces of refrigerator with warm soapy water, wipe and clean.
7. Reconnect refrigerator to electric outlet and turn ON. Transfer all items back to the refrigerator.
8. Record date of cleaning, comments, signature of person who cleaned.
9. Fill in the cleaning schedule form.

This form to be filled by the employee after performing cleaning procedure of the refrigerator. The same form may be used for cleaning other instruments or equipment.

<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Name of the employee</th>
<th>Comments</th>
<th>Signature</th>
</tr>
</thead>
</table>
1.17 Collection of Urine Specimen for Culture and Sensitivity

1. Purpose:
To aid in diagnosis of urinary tract infection

2. Items Required
a. Tray
b. Sterile specimen bottle
c. Distilled water
d. Cotton swabs
e. Gloves
f. Bedpan
g. Sterile kidney tray

3. Procedure:
   a. Non Ambulant Patient
      i. Check doctor’s orders
      ii. Gather equipment
      iii. Greet patient by name
      iv. Explain procedure to patient
      v. Screen bed to provide privacy
      vi. Place patient in bedpan
      vii. Expose patient as per requirements only.
      viii. Wash hands and dry
      ix. Wear gloves
      x. Swab patient with cotton swabs soaked in distilled water
      xi. Instruct patient to void
      xii. Place sterile kidney dish and collect specimen of urine
      xiii. Pour specimen into sterile bottle
      xiv. Dry patient
      xv. Remove gloves and discard
      xvi. Place patient in comfortable position and tidy bed
      xvii. Clean the used items
      xviii. Label specimen with patient details and date.
      xix. Dispatch specimen and form to laboratory
      xx. Document in nursing notes

   b. Ambulant Patient
      i. Instruct patient to wash initial part with soap and water and dry with tissues paper.
      ii. Instruct patient to void a little urine into sterile specimen bottle.
1.18. Collection of Blood for Culture and Sensitivity

Purpose:

To diagnose the presence of microorganism in the blood stream & to determine the sensitivity of microorganisms to particular antibiotics and to facilitate the choice of appropriate antibiotics

1. Indications
   a. Having temperature elevation > 38.5º to 39º C.
   b. Presence of signs or symptoms of sepsis (fever, chills, elevate white blood cells count, lethargy).
   c. Follow up evaluation in the patient with previous septicemia treated with antibiotics.
   d. Doctors should make collection request.

2. Equipment required
   a. Dressing Trolley.
   b. Sterile gloves.
   c. Sterile blood culture containers (aerobic and anaerobic).
   d. Sterile dressing set with swab and gauze.
   e. 2 sterile needles (21G).
   f. Tourniquet.
   g. Povidone iodine solution.
   h. Surgical spirit solution.
   i. Laboratory requisition form (signed by doctors).
   j. Patient’s identification labels (to stick on the blood culture bottles).
   k. Date & Time the labeling.

3. Procedures
   a. Greet patient by name.
   b. Explain to patient about procedure
   c. Wash hands thoroughly using proper hand washing techniques.
   d. Open up sterile dressing set and prepare 10 mls syringe, attach 21’ needle and check for patency. Pour in solutions.
   e. Apply tourniquet on extremity and select an appropriate vein.
   f. Use sterile gloves.
   g. Scrub the intended site with povidone iodine solutions, then clean the site with surgical spirit and allow to dry.
   h. Aspirate 10 ml of blood.
   i. Remove needle from site and immediately apply pressure to site with sterile gauze.
   j. Remove needle from syringe and attach new sterile needle and inject 5 ml of blood into both aerobic and anaerobic culture containers.
1.19. Procedure on Bed Making

Purpose:

To have a clean; crease free and comfortable bed for patient.

1. Items Required

a. Trolley with bed sheets, pillow, pillowcases and blankets.
b. Draw sheet and mackintosh / incontinent pads (optional).

2. Procedure

a. Place bottom sheet over mattress.
b. Tuck sheet in tightly making neat corners.
c. Place top sheet over bed.
d. Make neat corners and tuck in tightly at lower end of bed.
e. Repeat the same with blanket.
f. Fold top of blanket 1/3 down.
g. Fold top of sheet 1/3 down.
h. Tuck in both bed sheet and blanket neatly.
i. Place pillow at head of bed, with open ends facing away from entrance.

k. Label bottles and sent to laboratory.
1.20 BIO Medical Waste Management and segregation

Nursing personnel play a critical role in healthcare waste segregation in the hospitals. Adequate knowledge about the health hazard of hospital waste, proper technique, and methods of handling the waste could go a long way toward the safe disposal of hazardous hospital waste and protect the community.

All human activities produce waste. We all know that such waste may be dangerous and needs safe disposal. Industrial waste, sewage and agricultural waste pollute water, soil and air. It can also be dangerous to human beings and environment. Similarly, hospitals and other health care facilities generate lots of waste which can transmit infections, particularly HIV, Hepatitis B & C and Tetanus, to the people who handle it or come in contact with it.

India generates around three million tonnes of medical wastes every year and the amount is expected to grow at eight per cent annually.

Types of Bio-medical waste

Bio-medical waste means “any solid and/or liquid waste including its container and any intermediate product, which is generated during the diagnosis, treatment or immunization of human beings or animals or research activities pertaining thereto or in the production or testing of biological or in health camps.

Biomedical waste poses hazard due to two principal reasons – the first is infectivity and other toxicity.

Bio Medical waste consists of

- Human anatomical waste like tissues, organs and body parts
- Animal wastes generated during research from veterinary hospitals
- Microbiology and biotechnology wastes
- Waste sharps like hypodermic needles, syringes, scalpels and broken glass
- Discarded medicines and cytotoxic drugs
- Soiled waste such as dressing, bandages, plaster casts, material contaminated with blood, tubes and catheters
- Liquid waste from any of the infected areas
- Incineration ash and other chemical wastes

Biomedical waste (BMW) management requires its categorisation as a first step. The BMW Rules classify the BMW into following categories.

<table>
<thead>
<tr>
<th>CATEGORIES OF BIOMEDICAL WASTE SCHEDULE – I</th>
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</thead>
<tbody>
<tr>
<td>CATEGORY</td>
</tr>
<tr>
<td>-----------</td>
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</tbody>
</table>
Human tissues, organs, body parts and fetus below the viability period (as per the Medical Termination of Pregnancy Act 1971, amended from time to time).

**Animal Anatomical Waste**: Experimental animal carcasses, body parts, organs, tissues, including the waste generated from animals used in experiments or testing in veterinary hospitals or colleges or animal houses.

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Disposal Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soiled Waste</td>
<td>Items contaminated with blood, body fluids like dressings, plaster casts, cotton swabs and bags containing residual or discarded blood and blood components.</td>
<td>Incineration or Plasma Pyrolysis or deep burial *</td>
</tr>
<tr>
<td>Expired or Discarded Medicines:</td>
<td>Pharmaceutical waste like antibiotics, cytotoxic drugs including all items contaminated with cytotoxic drugs along with glass or plastic ampoules, vials etc.</td>
<td>Expired cytotoxic drugs and items contaminated with cytotoxic drugs to be returned back to the manufacturer or supplier for incineration at temperature &gt;1200°C or to common bio-medical waste treatment facility or hazardous waste treatment, storage and disposal facility for incineration at &gt;1200°C Or Encapsulation or Plasma Pyrolysis at &gt;1200°C</td>
</tr>
<tr>
<td>Chemical Waste:</td>
<td>Chemicals used in production of biological and used or discarded disinfectants</td>
<td>Disposed of by incineration or Plasma Pyrolysis or Encapsulation in hazardous waste treatment, storage</td>
</tr>
</tbody>
</table>
## Chemical Liquid Waste

Liquid waste generated due to use of chemicals in production of biological and used or discarded disinfectants, Silver X-ray film developing liquid, discarded Formalin, infected secretions, aspirated body fluids, liquid from laboratories and floor washings, cleaning, house-keeping and disinfecting activities etc.

- **Separate collection system leading to effluent treatment system**
- After resource recovery, the chemical liquid waste shall be pre-treated before mixing with other wastewater. The combined discharge shall conform to the discharge norms given in Schedule - III.

## Discarded linen, mattresses, beddings contaminated with blood or body fluid.

- **Non-chlorinated yellow plastic bags or suitable packing material**
- Non-chlorinated chemical disinfection followed by incineration or Plazma Pyrolysis or for energy recovery. In absence of above facilities, shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent for energy recovery or incineration or Plazma Pyrolysis.

## Microbiology, Biotechnology and other clinical laboratory waste:

- Blood bags, Laboratory cultures, stocks or specimens of micro-organisms, live or attenuated vaccines, human and animal cell cultures used in research, industrial laboratories, production of biological, residual toxins, dishes and devices used for cultures.

- **Autoclave safe plastic bags or containers**
- Pre-treat to sterilize with non-chlorinated chemicals on-site as per National AIDS Control Organisation or World Health Organisation guidelines thereafter for Incineration.

## Red Contaminated Waste (Recyclable)

- Wastes generated from disposable items such as tubing, bottles, intravenous tubes and sets, catheters, urine bags, syringes (without needles and fixed needle syringes) and vaccucontainers with their needles cut) and gloves.

- **Red coloured non-chlorinated plastic bags or containers**
- Autoclaving or micro-waving/hydroclaving followed by shredding or mutilation or combination of sterilization and shredding. Treated waste to be sent to registered or authorized recyclers or for energy recovery or plastics to diesel or fuel oil or for road making, whichever is possible. Plastic waste
### Waste sharps including Metals:
Needles, syringes with fixed needles, needles from needle tip cutter or burner, scalpels, blades, or any other contaminated sharp object that may cause puncture and cuts. This includes both used, discarded and contaminated metal sharps.

- **White (Translucent)**
  - Puncture proof, Leak proof, tamper proof containers
  - Autoclaving or Dry Heat Sterilization followed by shredding or mutilation or encapsulation in metal container or cement concrete; combination of shredding cum autoclaving; and sent for final disposal to iron foundries (having consent to operate from the State Pollution Control Board s or Pollution Control Committee s) or sanitary landfill or designated concrete waste sharp pit.

- **Blue**
  - Cardboard boxes with blue colored marking
  - Disinfection (by soaking the washed glass waste after cleaning with detergent and Sodium Hypochlorite treatment) or through autoclaving or microwaving or hydroclaving and then sent for recycling.

* Disposal by deep burial is permitted only in rural or remote areas where there is no access to common bio-medical waste treatment facility. This will be carried out with prior approval from the prescribed authority and as per the Standards specified in Schedule - III. The deep burial facility shall be located as per the provisions and guidelines issued by Central Pollution Control Board from time to time.

### Segregation

Segregation refers to the basic separation of different categories of waste generated at source and thereby reducing the risks as well as cost of handling and disposal. Segregation is the most crucial step in bio-medical waste management. Effective segregation alone can ensure effective bio-medical waste management.

**How does segregation help?**

- Segregation reduces the amount of waste needs special handling and treatment
- Effective segregation process prevents the mixture of medical waste like sharps with the general municipal waste.
• Prevents illegally reuse of certain components of medical waste like used syringes, needles and other plastics.
• Provides an opportunity for recycling certain components of medical waste like plastics after proper and thorough disinfection.
• Recycled plastic material can be used for non-food grade applications.
• Of the general waste, the biodegradable waste can be composted within the hospital premises and can be used for gardening purposes.
• Recycling is a good environmental practice, which can also double as a revenue generating activity.
• Reduces the cost of treatment and disposal (80 per cent of a hospital’s waste is general waste, which does not require special treatment, provided it is not contaminated with other infectious waste).

Proper labelling of bins
The bins and bags should carry the biohazard symbol indicating the nature of waste to the patients and public.
Collection

Personnel safety devices

The use of protective gears should be made mandatory for all the personnel handling waste.

Gloves: Heavy-duty rubber gloves should be used for waste handling by the waste retrievers. This should be bright yellow in colour. After handling the waste, the gloves should be washed twice. The gloves should be washed after every use with carbolic soap and a disinfectant. The size should fit the operator.

Aprons, gowns, suits or other apparels: Apparel is worn to prevent contamination of clothing and protect skin. It could be made of cloth or impermeable material such as plastic. People working in incinerator chambers should have gowns or suits made of non-inflammable material.

Masks: Various types of masks, goggles, and face shields are worn alone or in combination, to provide a protective barrier. It is mandatory for personnel working in the incinerator chamber to wear a mask covering both nose and mouth, preferably a gas mask with filters.

Boots: Leg coverings, boots or shoe-cover provide greater protection to the skin when splashes or large quantities of infected waste have to be handled. The boots should be rubber-soled and anti-skid type. They should cover the leg up to the ankle.

Cleaning devices

Brooms: The broom shall be a minimum of 1.2 m long, such that the worker need not stoop to sweep. The diameter of the broom should be convenient to handle. The brush of the broom shall be soft or hard depending on the type of flooring.

Dustpans: The dustpans should be used to collect the dust from the sweeping operations. They may be either of plastic or enamelled metal. They should be free of ribs and should have smooth contours, to prevent dust from sticking to the surface. They should be washed with disinfectants and dried before every use.

Mops: Mops with long handles must be used for swabbing the floor. They shall be of either the cloth or the rubber variety. The mop has to be replaced depending on the wear and tear. The mechanical-screw type of mop is convenient for squeezing out the water.

Vacuum cleaners: Domestic vacuum cleaners or industrial vacuum cleaners can be used depending on the size of the rooms.
Amendments in Bio-Medical Waste Management Rules, 2016 Rules

Bio-Medical Waste Management Rules, 2016 Rules have been amended to improve compliance and strengthen the implementation of environmentally sound management of biomedical waste in India.

The amended rules stipulate that generators of bio-medical waste such as hospitals, nursing homes, clinics, and dispensaries etc will not use chlorinated plastic bags and gloves beyond March 27, 2019 in medical applications to save the environment. Blood bags have been exempted for phase-out, as per the amended BMW rules, 2018.

**Salient features of Bio-Medical Waste Management (Amendment) Rules, 2018 are as follows:**

1. Bio-medical waste generators including hospitals, nursing homes, clinics, dispensaries, veterinary institutions, animal houses, pathological laboratories, blood banks, health care facilities, and clinical establishments will have to phase out chlorinated plastic bags (excluding blood bags) and gloves by March 27, 2019.

2. All healthcare facilities shall make available the annual report on its website within a period of two years from the date of publication of the Bio-Medical Waste Management (Amendment) Rules, 2018.

3. Operators of common bio-medical waste treatment and disposal facilities shall establish bar coding and global positioning system for handling of bio-medical waste in accordance with guidelines issued by the Central Pollution Control Board by March 27, 2019.

4. The State Pollution Control Boards/ Pollution Control Committees have to compile, review and analyze the information received and send this information to the Central Pollution Control Board in a new Form (Form IV A), which seeks detailed information regarding district-wise bio-medical waste generation, information on Health Care Facilities having captive treatment facilities, information on common bio-medical waste treatment and disposal facilities.

5. Every occupier, i.e. a person having administrative control over the institution and the premises generating biomedical waste shall pre-treat the laboratory waste, microbiological waste,
blood samples, and blood bags through disinfection or sterilization on-site in the manner as prescribed by the World Health Organization (WHO) or guidelines on safe management of wastes from health care activities and WHO Blue Book 2014 and then sent to the Common bio-medical waste treatment facility for final disposal.
SPECIAL NURSING PROCEDURES

a. NICU/PICU

a.1 Special Care Nursery

1. Pediatric Wards:
   a. **Breast-fed infants** – Prevention of hospital induced lactation failure:
      i. Mothers of breast-fed infants should be encouraged to stay with their infants in the wards. Priority should be given to them for use of rooms.
      ii. When infants are too ill to suck, mothers should be advised and shown how to express their milk to keep the milk flowing and to feed infants with expressed breast milk if possible.
      iii. Infants should be put back to the breast as soon as possible
   b. **Non breast-fed infants** – establishment of lactation
      i. When newborn infants of less than 2 weeks of age admitted to the pediatric wards, hospital staff should motivate, encourage and support their mothers to breast-feed them. However do not force mother to breast-feed nor make her feel guilty for not breast-feeding, if persuasions fail.
      ii. Put the baby to the breast as soon as baby is well enough to suck.
      iii. Breast feed frequently, preferably every 2 hours and allows the baby to suck both breasts as long as desired (minimum 20 minutes).
      iv. Full lactation may take a few days to establish for the mother who did not breast-feed or Express their milk out during the first few days after delivery.
      v. During the period before lactation is established, it may be necessary to give top feeds. Relaxed atmosphere in the ward should be created to avoid maternal anxiety and fatigue.

2. Roaming-In Baby
   a. Explain the importance and benefits of breastfeeding to the patient.
   b. Encourage to room-in for single room only.
   c. Consent required from the mother.
   d. For LSCS under general anesthesia.
      i. After baby has been cleaned, put the baby on infant warmer. Give formula milk to the baby if mother is drowsy or push baby to bedside for breastfeeding as requested by mother.
      ii. Routinely, baby will be sent to the mother’s room after 4 to 6 hours.
      iii. Teach mother how to manage the baby.
      iv. Teach mother method of breastfeeding.
e. **For LSCS under spinal:**
   i. After baby has been cleaned, put the baby on the infant warmer while waiting for mother to come up from operating room.
   ii. Give baby to the mother after body temperature is normal and condition is stable.

f. **For normal delivery:**
   i. Initiate breastfeeding within ½ an hour.
   ii. Stabilize the baby in nursery and sent baby to the mother after 1 hour.
a.2. Admission of Newborn to Nursery

1. Elective or Emergency LSCS

   a. One Pediatrician will stand by in operating theater to receive the baby. Receive the baby & place under pre-warmed radiant warmer, Apgar score, dry, suction, check for anomalies, hand over the baby to circulating nurse.
   b. Nurse to place ID band.
   c. (One identification will be attached to the baby before transporting the newborn to the nursery.)
   d. The newborn will be brought to the Special care nursery.
   e. Place the newborn under infant warmer.
   f. Give injection Vitamin K.
   g. Put on another identification to leg and show to baby’s father.

2. Normal Delivery

   a. Place the newborn in an infant warmer, clean the baby and give injection as above.
   b. Give to the mother to initiate breastfeeding if mother agrees.
   c. In nursery, place the newborn in an infant warmer. Pass over to nursery staff:
      i. Baby of so and so.
      ii. Time of delivery.
      iii. Sex of baby.
      iv. Any abnormalities.
      v. PU and BO.
   d. Nursery staff has to double check while receiving the newborn.
   e. To perform stomach washout only for meconium stained liquor baby or ordered by doctors.
   f. If normal delivery, not necessary to perform stomach washout.
   g. Take the observation of the newborn:
      i. Apex beat
      ii. Temperature record in observation chart.
      iii. Respiration
   h. Give feeds as soon as possible if the condition is stable or start IVF as per the order.
a.3. Transfer/Referral Of Neonate To Outside Facility

1. Approach to Neonatal Transfer:
   a. Communication: by consultant /M.O on duty
      i. Contact referral hospital – discuss with receiving staff about the transfer and requirements, if needed request for advice.
      ii. Record time and details of conversation
   b. Stabilization
      i. Airway Suctioning and maintenance of clear airway by:
         ii. Administer oxygen via cannula, head box, bag and mask or endotracheal tube
         iii. Monitor oxygen saturation & vital signs
   c. Breathing
      i. Observe breathing effort and rate
      ii. Support breathing by bagging if required
      iii. Note effectiveness of manual respiratory support
      iv. Take blood gas samples periodically to assess respiratory support
   d. Colour
      i. Observe colour.
      ii. Suction Airway and administer oxygen effectively
      iii. Keep baby warm under radiant warmer
   e. Drugs
      i. Administer drugs as required and ordered by the doctor
      ii. Correct hypoglycemia after capillary blood sugar sampling
   f. Environment
      i. Warm up transport incubator setting at 35-36 degrees centigrade using main power supply
      ii. Line incubator and place necessary articles inside
      iii. Monitor temperature of baby
      iv. Warm baby up to normal body temperature under radiant warmer.
      v. Transfer into transport incubator.
   g. Fluids
      i. Set up intravenous infusion as per pediatrician’s order
      ii. Set flow rate and check regularly if there is no infusion pump to control
a.4. Procedure of Discharge of Infant

1. Doctor has to confirm that infant is for discharge & writes down the discharge.
2. Ensure all relevant immunizations are given according to the age of the baby (BCG will usually be given on the first day after delivery)
3. Discharge is summarized and signed by the doctor and Child Health and Development card summary is completed
4. The doctor writes referral letters to the respective places for the follow-up care
5. Parents is to be informed about the discharge well in advance
6. Make appointments for the follow-up at Pediatric clinic and inform parents.
7. Check identification labels with parents to avoid mistakes
8. Give the discharge note, immunization schedule, follow-up card, referral letter to parents and get them to sign the release of infant form and the hospital bill
9. Help parents to dress the infant, explain medications, special care and feeding regime
10. Use checklist to ensure all aspects are covered
11. Dispatch patient's case notes to record office with completed and signed summary of case.
12. Refer Discharge Policy.
a.5. Discharge of Infants from the Nursery (NICU)

Purpose
The aim is to ensure that the transfer of care of the infant from our center to the home is smooth and effective with minimal stress to the infant, parents and the nursery staff.

Aspect of Discharge Planning

a. Re-bonding
b. Parent education.
c. Participation of care.
d. Continuation of care.

Procedure

a. Case notes are summarized and signed by the doctor.
b. Referral letters to respective place for follow up care are written by the doctor (if requested by parents).
c. Parents are to be informed about the discharge.
d. Make appointment for follow-up.
e. Check identification labels with parents to avoid mistakes.
f. Inform parents of clinic appointment.
g. Give parents the appointment card, baby’s record and hospital bill.
h. Help parent to dress the infant.
i. Explain medication, special care feeding and immunization schedule again.
a.6. Collection of Expressed Breast Milk (EBM)

1. Preparation
   a. **Hygiene:** The mother’s hands must be thoroughly washed with soap and water and should not touch other object during expression except her breast and milk container.

2. Equipment
   a. **Storage Unit**
      i. Refrigerator with large freezer
      ii. Find a place in the middle compartment of the refrigerator to store the EBM.
      iii. Breast milk not to be stored in Medication fridge. BM stored refrigerated for 24 hours only and discarded if not used within 24 hours, the refrigerated BM to be frozen within 8 hours if not required to be used within 24 hours.
   b. **Containers:** Sterile plastic bottle for each collection and labeled with Patient details
   c. **Breast Pumps:** The pump and its parts must be cleaned with detergent & sterilized by chemical disinfectants before use.

3. Label
   a. Label the container, which will be delivered to nursery with the following information:
      i. Mother’s name/infants name as baby of ……………so & so…
      ii. Date and time of commencement of collection.
      iii. Breast milk to be stored in refrigerator for 24 hrs only and discard if not used within 24 hrs
      iv. The refrigerated BM to be frozen within 8 hrs if not required to be used in 24 hrs.
      v. Once BM is taken out of freezer do not keep in refrigerator for more than 24 hrs
      vi. Do not allow refrigerated BM to be in room temperature for more than 30 minutes.

4. Place
   a. Advise mother to express her milk in a private place free from strong air currents

5. Frequency
   a. Express at frequent intervals to encourage milk production.
6. Care of the breast
   a. Express gently especially by hand expression. Squeezing until pain occurs will damage the milk cells and will not result in any more milk.
   b. Compress at areola area of the breast not at the nipple.
   c. Empty both breast fully.

7. Transportation
   a. EBM stored in the middle compartment of the home refrigerator (between 4 -8°C) lasts for 24 – 48 hours. Fresh EBM can be kept at room temperature for up to 3 hours.
   b. Ensure that the lid of the plastic container is tightly closed to avoid contamination. Place in cold carrier or container with ice packs. The aim is to prevent the milk from warming up which encourages bacterial growth.

8. Feeding
   a. Feed the “older” milk first.
   b. Pour required aliquot into a cool, sterile, plastic container. Return the remaining milk immediately to the refrigerator.
   c. Avoid warming up milk by standing the container in hot water. Leave at room temperature for 20 – 30 minutes before feeding.
a.7. NasoGastric Feeding

1. Equipment
   a. Feeding tube.
   b. Syringe.
   c. Stethoscope.
   d. Milk - EBM.
   e. Artificial formula milk

2. Procedure
   a. Feeding Method
      i. Assessment
         • Ensure feeding is indicated.
         • Rule out persistent abdominal distention or lethargy.
         • Be familiar with baby’s ability to tolerate any previous feeds.
         • Check baby for any contraindication to feeding.
         • Confirm volume frequency and type of feeding.
      ii. Preparation
         • Clean up baby, position right lateral, prone or supine with head turned to one side and slightly elevated.
         • Ensure neutral thermal environment.
         • Prepare equipment.
         • Assess temperature of milk.
      iii. Performance
         • Measure length to be inserted.
         • Mark the site of length to be inserted.
         • Insert the tube.
         • Plug the tube.
         • Insert the tube gently and smoothly to the predetermined mark.
         • Use sticky tape to stabilize position.
      iv. Confirmation of Tube Placement
- Pinch the tube to unplug it and insert the assembled syringe.
- Aspirate gently.
- Withdraw gastric content or alternatively use stethoscope and auscultate over the stomach while 1 ml of air is introduced. A gush of air can be heard to confirm correct placement.
- For NPO babies do gastric PH Q 8 hourly, if PH less than 3 inform neonatologist

v. **Introduce Feed**
- Remove syringe and plug end of gastric tube.
- Separate piston and barrel of syringe.
- Reattach barrel to gastric tube.
- Pinch tube.
- Pour small aliquots of milk into barrel of syringe.
- Release pinches of gastric tube and allow milk to flow.
- Hold barrel at about 15 cm from neonate’s body.
- Maintain position of gastric tube while allowing milk to flow.

vi. **Post Feeding**
- Allow neonate in the same position as during feeding.
- Observe gastric distention or vomiting after half an hour.
- Record amount of aspirate and amount of milk given.
- Change position after 1 hour if necessary.
a.8. Umbilical Artery Cannulation

**Purpose**
This sterile procedure is carried out by the doctor and the nurse under a radiant warmer and the parent should be informed about the procedure.

**1. Procedure**
A suitable sized catheter is inserted into one of the umbilical arteries of the neonate to a calculated length or measurement, if it is to be left in situ. Preferably the catheter should not be in situ for more than 3 days to avoid complication like thrombosis or embolism. It is connected to an infusion of heparin saline 1:1 at 0.5 – 1 ml per hour or flush regularly to reduce this complication.

**a. Indication**
- i. Frequent blood sampling especially blood gases.
- ii. Continuous arterial blood pressure monitoring.

**b. Requirement**
- i. Sterile gown.
- ii. Adhesive tape, tincture benzoin and scissors.
- iii. Cannulation set.
- iv. Additional requirements.
  - Sterile towel.
  - Scalpel blade.
  - Cord string.
  - Umbilical arterial catheter.
  - Black silk.
  - Syringes.
  - Lotion antiseptic.

**c. Preparation before Procedure**
- i. Servo controlled radiant warmer.
- ii. Prepare the equipment.
- iii. Resuscitation trolley.
- iv. Monitoring equipment.
- v. Record pre-procedure observation.
- vi. Determine the length by using the neonate’s body weight:
  
  \[
  \text{Length (cm)} = (\text{weight} \times 3) + 9
  \]

**d. Complication of the UAC Cannulation**
- i. Bleeding from umbilical stump.
- ii. Vasospasm or ischemia.
- iii. Infection.
iv. Thrombosis or embolism.

v. Necrotizing Enterocolitis.

<table>
<thead>
<tr>
<th><strong>THE NURSE</strong></th>
<th><strong>THE DOCTOR</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare neonate</td>
<td>Determine the length to be inserted</td>
</tr>
<tr>
<td>Prepare equipment</td>
<td>Mask and surgical hand wash</td>
</tr>
<tr>
<td>Open gown pack</td>
<td>Draw out sterile paper towel to dry hands</td>
</tr>
<tr>
<td>Tie gown strings</td>
<td>Put on gown</td>
</tr>
<tr>
<td>Open glove pack</td>
<td>Put on sterile glove</td>
</tr>
<tr>
<td>Request doctor to expose sterile tray</td>
<td>Open sterile tray and arrange equipment</td>
</tr>
<tr>
<td>Add in additional items</td>
<td></td>
</tr>
<tr>
<td>Hold heparinised saline bottle for doctor to withdraw solution into catheter</td>
<td>Withdraw heparinised saline to flush catheter and leave syringe attached</td>
</tr>
<tr>
<td>Hold neonate legs and umbilical cord with forceps while abdomen is being swabbed</td>
<td>Pick up the end of umbilical cord with forceps and pass to nurse. Perform skin preparation for surgery</td>
</tr>
<tr>
<td>Hold up neonate legs for doctor to place sterile drape underneath baby</td>
<td>Place sterile drape under neonate</td>
</tr>
<tr>
<td>Pass umbilical cord through keyhole of sterile drape</td>
<td>Cover neonate’s abdomen with sterile drape except umbilical site</td>
</tr>
<tr>
<td>Hold umbilical cord while doctor ligates and cuts it</td>
<td>Ligate umbilical cord lightly near its base using an umbilical cord ligature if bleeding occurs</td>
</tr>
<tr>
<td>Observe constantly neonate’s condition</td>
<td></td>
</tr>
<tr>
<td>Hold neonate’s legs still while doctor insert a catheter</td>
<td>Dilate umbilical artery with probe. Insert catheter without force and advance. Withdraw blood to determine that catheter is inserted into the artery and not vein.</td>
</tr>
<tr>
<td>Request doctor to raise sterile towel to observe the blanching of site at abdomen and lower limbs before anchoring with suture.</td>
<td>Pick up sterile towel to observe for blanching of lower limbs. Anchor with suture. Take blood for any urgent investigation.</td>
</tr>
<tr>
<td>Spray umbilical site.</td>
<td>Assist nurse in spraying umbilical site and remove drape</td>
</tr>
<tr>
<td>Clean surrounding area of abdomen</td>
<td></td>
</tr>
<tr>
<td>Make neonate comfortable</td>
<td>Report procedure in medical notes and complete X-Ray request form to verify catheter position</td>
</tr>
<tr>
<td>Record observation</td>
<td></td>
</tr>
<tr>
<td>Send blood sample to laboratory</td>
<td></td>
</tr>
</tbody>
</table>
a.9. Nursing Routines

1. Daily Or Per Shift
   a. Infection control
      i. Wash hands before entering the patient unit.
      ii. Washing of hands before and after each procedure.
      iii. Top & tail neonate as when required & (also to be done by night nurse before weighing and changing incubators/basinets etc.)
      iv. Wipe inside and outside of incubator, bassinet or radiant warmer
      v. Change or clean neonate’s individual items – stethoscope, thermometer, toilet bowls, swabs, linen, heat shield, head box.
   b. Plan of care
      i. Review plan of care when taking over and adjust plan after each review or change of condition of neonate.
      ii. Review previous feeding chart and plan for the day’s intake and Calories
      iii. Discuss plan of care during ward round
      iv. Record plans for accountability
   c. Weighing
      i. Daily weight for all neonates (to be done by night nurse at 12.00 midnight)
   d. Medication
      i. Review and inform Dr Number of days of specific drug therapy
      ii. Update recording and charting
      iii. Vitamin supplements including iron are given routinely to all neonates in NICU from 2 weeks of age. However iron can be started anytime between 2 weeks and 2 months for low birth weight infants.
   e. Resuscitation trolley
      i. Clean and rearrange equipment
   f. Or procedure trolley
      i. Update requirements from checklist and sign for accountability
   g. Irradiance of
      i. Use radiometer (fluorite meter)
   h. Photo therapy light
      i. Record reading in observation chart
      ii. Record change of bulbs in designated booklets
j. **PRN**

i. Wash or disinfect hands before and after touching neonate or
ii. Contaminated article
iii. Review treatment and care
iv. Check insertion of intravenous and other indwelling lines and rate of flow
v. Check endotracheal taping on neonate. Re-tape when necessary
vi. Suction and tubes (endotracheal or nasal catheters) if indicative of blockage
vii. Health education to parents (breast feeding, plans for discharge)

k. **24 Hour Nursing Care**

i. Begin 24 hour fluid balance from 6.00 am to 6.00 am next day
ii. Night staff to summarize intake and output.
iii. Plan fluid input for the current day
iv. Change all intravenous lines after review except those with 96 hour bacterial filters. Ventilator circuits are changed every 72 hours

l. **24 hour-nursing records**

i. Night staff write report for preceding 24 hours
ii. Order meals for rooming-in mothers

m. **Weekly**

i. Change incubator or bassinet & ventilator for terminal cleaning

n. **Biweekly**

i. Head circumference (length is measured on admission as soon as infant is stable and every week on Sunday midnight).
a.10. Top and Tail

**Purpose:**

To keep baby clean.

1. **Procedure:**
   a. Do medical hand wash.
   b. Prepare equipment:
      i. Sterile cotton ball.
      ii. Warm boiled water.
      iii. Receiver.
   c. Swab from inner corner to outer corner of the eyes.
      i. Use one swab for one eye only.
   d. Clean forehead, left and right cheek, nose around the mouth and the neck.
      i. Use 1 swab for one part only.
   e. Swab the armpit, groin, upper and lower arm if dirty.
   f. Clean the buttock and private part.
   g. Clear the instrument.
   h. Do medical hand wash and prepare set for cord care:
      i. Alcohol swab.
      ii. Receiver.
   i. Observe for symptoms of infection e.g. discharge or foul odor.
   j. Clean from top to bottom if cord is still wet.
   k. Clean from bottom to top if cord is dry.
   l. Report and record any abnormalities
a.11. Baby of Group B Streptococcus (GBS) mother

1. In labor mother will be covered with antibiotic (depend on practice of individual doctor).

2. When baby is transferred to the nursery, the labour room staff has to inform the nursery staff.

3. Nursery staff has to inform the doctor in charge.

4. Baby is kept in nursery for 48 hours (depending on the practice of individual doctor).

5. Observe for: -
   a. Temperature
   b. Sign of respiratory distress.
   c. Color.
   d. Lethargy.
   e. Poor feeding.
   f. Vomiting.
   g. Abdominal distention.
   h. Irritability.
   i. Seizures.

6. Inform to doctor and explain to parents.

7. If one of the above sign is present, the nursery staff has to inform the doctor in charge.
a.12. Care of the Newborn

Purpose

The promotion of adaptation to extra uterine life, the immediate care of neonate & the subsequent care of neonate.

1. Procedure:

a. Promotion of Newborn’s Adaptation to Extra-uterine Life

As most of the neonatal problems arises during the first 24 to 48 hours of newborn’s life this is a time when close observation is necessary. In order to care for neonate a nurse must understand the physiology of adaptation process that newborn go through and the type of problems that arise. The newborn will experience 2 areas of change:

i. The environment.

ii. Its physiologic functions.

<table>
<thead>
<tr>
<th>Environment</th>
<th>Intrauterine</th>
<th>Extra uterine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Protection</td>
<td>The uterine wall and amniotic fluids</td>
<td>Not ensured. Requires special protection</td>
</tr>
<tr>
<td>Temperature</td>
<td>Regulated by the mother</td>
<td>Risk of exposure to cold and air currents</td>
</tr>
</tbody>
</table>

Physiologic Function:

<table>
<thead>
<tr>
<th></th>
<th>Placenta</th>
<th>Lungs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas exchange</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circulation</td>
<td>Fetal via placenta</td>
<td>Neonatal</td>
</tr>
<tr>
<td>Nourishment</td>
<td>Materno -placental</td>
<td>Needs to be fed</td>
</tr>
</tbody>
</table>

b. The transitional period is usually considered to be the first 8 hours of life. Fetal function, which aid in the transition from fetal to neonatal life;

i. Storage of glycogen for supply of heat and energy at birth and adaptation to the extra uterine life.

ii. Production of catecholamines. To mature the lungs and to promote surfactant production.

Production and deposition of brown fat. Brown fat is found between the shoulder, over the scapulae, axillae, vital organs and great vessel in the body. The lipolysis of brown fat produces heat and protects the infant against hypothermia.
a.13. Care of Neonate on Mechanical ventilator

Purpose:

To promote effective gas exchange when this is impaired due to disease, or during failure to maintain spontaneous respiration and Respiratory failure.

1. Procedure:

NURSING APPROACH

a. Position of Endotracheal Tube (ETT)

It is important. A poorly fixed ETT will result in movement of the tube during handling, causing damage to the airway. Movement of the tube may result in displacement.

i. Compare length inserted at side of insertion to length as recorded on ventilator chart.

ii. For nasal intubation, position endotracheal tube at 45 degrees angle to the plan of face. This is to avoid disfigurement of the nostril. Re-tape whenever there is any indication that it is loose.

iii. Check air entry hourly: after positioning, suctioning, physiotherapy and at other time when it might be indicated.

b. Maintenance of Clear Airway

i. Note air entry and characteristic of secretion.

ii. Suction airway aseptically when necessary. Ensure humidification is constant i.e. the humidification chamber has water at the stipulated level and the temperature is within 36.5 - 37°C. Check the chamber hourly and top-up with sterile water.

iii. Place a small neck roll under the shoulder.

iv. Change neonate position 2 hourly to promote chest drainage. Except for unstable baby.

v. Suction the neonate in the presenting position before changing his position.

vi. Perform chest physiotherapy with minimum stress when necessary. Avoid the head down position and stop when SaO2 is below 90% or there is a change in color.

vii. Place the ventilator tubing securely.

viii. Check the kinking and disconnection of the endotracheal tube and ventilator circuit.

ix. Ensure all alarm are ‘ON’.
x. Before disconnecting the circuit disengage the audible alarm (alarm silence). This is to avoid false alarms from sounding which create noise pollution as well as causing unnecessary anxiety to babies and other staff.

c. Promotion Effective Gas Exchange
   i. Follow the ventilator parameters according to the doctor’s orders.
   ii. Check hourly the parameters as set.
   iii. Any changes made in the parameters should be noted in red and time recorded.
   iv. Take blood for blood gas 15 to 30 minutes after change in the parameter – if necessary.
   v. Others abnormalities in the result should be notified to the doctor.
   vi. Continuous oxygen saturation monitoring should be applied during any procedure and FIO2 increased if hypoxia occurs. After the procedure is completed ensure FiO2 is readjusted appropriately.
   vii. Check for position of endotracheal tube, kinking of tube, air entry and neonate’s chest wall movement, color and behavior. If recession is present this may indicate blockage of the tube or under-ventilation and deterioration in the condition of the baby.
   viii. Rule out blocked tube or pneumothorax whenever neonate is restless, fighting or cyanosed. Remove endotracheal tube and ventilate by bag and mask whenever blockage is suspected and infant is in a critical condition. Immediate re-intubation is required.
   ix. Suction endotracheal tube using pressure of 50 mmHg to 80 mmHg and if this is not effective, use pressure up to 100 mmHg.

d. General Care
   i. Infection Control: Observe aseptic technique during insertion of endotracheal tube and during suctioning.
   ii. Monitoring of Vital Signs
      - Temperature
      - Body temperature every 4 hours. Abnormal body temperature will increase metabolic rate and oxygen consumption.
      - Humidifier temperature should be between 36.5 - 37°C.
      - Cardio-respiratory function
      - Use monitor and pulse oximeter to reduce handling of the neonate.
      - Observe hourly to note for abnormal sign especially for air leak.
      - Apnoea alarm always be ON in a ventilated baby to detect accidental extubation.
• Activity and color
• Be sensitive to neonate’s activities and color.

e. **Administration of Medication**
   i. Muscle relaxation or sedation e.g. Morphine.
      • To sedate the neonate, to prevent accidental extubation when baby starts to become active/restless

f. **Nutrition, Fluid and Electrolyte Balance**
   i. Initially keep NPO give intra venous fluids as per order
   ii. Once condition is stable milk, preferably expressed breast milk (EBM) is given via oro gastric tube and increase as per tolerance.
   iii. Monitor urine output
   iv. Assess capillary blood sugar in all ill and unstable infants and those not on oral feeding every 4 hrly & PRN


g. **Hygiene**
   i. Top and tail daily.
   ii. Cord care under aseptic technique.
   iii. Ensure the nostril and mouth of neonate are clean, free from mucus crust or blood clot.
   iv. Keep lips moist with glycerine application.
   v. Top & tail the neonate every 8 hrly

h. **Bonding**
   i. Encourage parents’ visit to encourage physical and voice contact.
   ii. Inform and update parents on neonate’s progress.
   iii. Encourage the mother to Express Breast Milk (EBM).
a.14. Oxygen therapy in Neonate

Purpose:
To provide adequate oxygen to neonates.

1. Procedure:
   a. Indication
      i. Neonate with the following sign of respiratory distress (nasal flaring, grunting, rapid respiration, gasping, intercostals/subcostal/ternal recession and retraction).
      ii. Cyanosis.
      iii. Apnea.
      iv. Asphyxia.
      v. SaO2 less than 95%.
   b. Method
      i. Nasal prongs/cannula/catheter.
      ii. Head box.
      iii. Bag and mask.
      iv. CPAP mode (continue positive airway pressure mode)
      v. IPPV.
   c. Method of Administration of Oxygen to Neonates
      i. Nasal prongs/ Cannula or Catheter
         ▪ Indication
         ▪ Neonates who need only a minimal amount of oxygen.
      ii. Best suited for neonates in the recovery phase lung disease or those with chronic lung disease.
      iii. Equipment
         • Oxygen source.
         • Oxygen flow meter.
         • Humidifier filled with sterile water to marked level.
         • Tubing sufficiently long but without too much dead space.
         • Nasal catheter or feeding tube.
         • Adhesive tape.
         • Pulse oximeter.
iv. **Procedure**
   - Inform and explain the purpose and to the parent of neonate.
   - Assemble equipment and test flow of oxygen.
   - Regulate flow rate.
   - Suction upper airway and remove any mucus plugs in nares.
   - Secure the catheter in position using adhesive tape.
   - Monitor success of oxygen therapy by measuring SaO2, observing the color before and during oxygen therapy.

d. **Oxygen Therapy via Head box**
   Oxygen is supplied to head box either alone or as an air/oxygen mix. It can be safely used alone provided the oxygen flow rate is high enough to flush the carbon dioxide produced by the baby, normally at flow rate of 4 liters per minute.

i. **Equipment**
   - For administering oxygen alone
     - Appropriate size head box.
     - Neck flap to reduce size of neck hole.
     - Oxygen supply system.
     - Pulse oximeter.
   - Additional equipment for administering an air/oxygen mix
     - Source of compressed air.
     - Air flow meter.
     - ‘Y’ connecter.
     - Additional oxygen tubing.

ii. **Procedure**
   - Explain to parents the purpose of therapy.
   - Place head box on flat surface.
   - Flush head box with humidified oxygen.
   - Place neonate’s head inside the head box.
   - Monitor SaO2 after 10 to 20 minutes of therapy.

iii. **Additional procedure for administering air oxygen mix**
   - The air and oxygen outlets are connected by the ‘Y’ connecter.
• The flow of air and oxygen is adjusted to obtain the desired FiO2.

e. Oxygen Therapy via Bag and Mask

i. Indication
This method is used as a temporary measure to relieve acute hypoxia in a neonate. It most commonly used during resuscitation but may also be used in NICU when there is temporary interruption in ventilation. Bag and mask technique imitates respiratory effort when the neonate is unable to perform this effectively for himself. Typical situation include:

• Apnoea.
• Acute onset of cyanosis.
• Gasping due to asphyxia.
• Heart rate less than 100 beats per minute.
• During period when an infant on IPPV is disconnected from the ventilator e.g. for changing of circuits or for suctioning.

ii. Equipment
• Oxygen supply system.
• Pediatric bag and mask.
• Pulse oximeter.
• Reservoir “bag” or “tubing”.

iii. Procedure
• Attach oxygen tubing to assemble bag and mask of appropriate size.
• Turn on oxygen flow to 5 – 6 liters of humidified oxygen to saturate oxygen bag.
• Position neonate on supine with head slightly extended.
• Suction oro and naso-pharynx.
• Place mask correctly creating a tight seal over the neonate’s mouth and nose.
• Maintain neonate head and neck in ‘sniffing’ position while compressing bag intermittently at 40 – 60 breaths/minute.
• Compress rhythmically to synchronize neonate’s respiratory effort or observe chest wall expansion during compression.
• Observe colour and SaO2 of neonate for improvement. If no improvement, reassess technique and repeat or intubate if necessary.
• If bagging is prolonged, gastric distention may occur and it may be necessary to pass an oro-gastric tube to decompress the stomach.

f. **Oxygen Therapy via Continuous Positive Airway Pressure (CPAP)**

A continuous pressure, usually between 4 and 10 cm of water is applied to the lungs.

i. **Aim**

To keep the alveoli partially expended during the expiratory phase (preventing atelectasis) and thus decreasing the work of breathing and improving oxygenation.

ii. **Indication**

- Respiratory distress syndrome.
- Apnoea.
- Weaning from IPPV.

iii. **Methods**

- Endotracheal CPAP.
- Nasal CPAP via ventilator.
- Nasal CPAP via nasal prongs.

iv. **Endotracheal CPAP**

Applying CPAP via endotracheal intubation. This method is usually applied during weaning from full mechanical ventilation and endotracheal tube already in situ. Usually for 24 hours but can used for prolonged period in infant with chronic lung disease.
g. Oxygen Therapy via Continuous Positive Airway Pressure (CPAP)

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iv. Endotracheal CPAP
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v. Equipment
- Ventilator with compress air and oxygen source.
- ETT tube, magill forceps, laryngoscope.
- Adhesive tape, string, KY jelly, suction apparatus, bag and mask, oxygen source.

vi. Procedure and Nursing Care
- Monitor neonate as if on ventilator. Check vital signs, monitor SaO2, respiratory rate and effort hourly or according to condition of neonate. The level of CPAP is set from the PEEP pressure. Normally pressure is set at 2-4 cm water, but can be increased up to 10 cm if required.
- Monitor blood gas as ordered.
- Perform sterile endotracheal suctioning and check air entry.
Monitor for apnoea.  
Observe for apnoea, cyanosis, recession bradycardia and abnormal blood gas result.  
Inform doctor if in spite of clear airways, the baby’s condition worsen as certain proportion of babies will fail to tolerate CPAP and will need to be put on IPPV.

h. Nasal CPAP Using Nasal Prongs  

i. Equipment  
- Source of compressed air and oxygen.  
- Oxygen flow meter and air flow meter.  
- CPAP circuit with correct sized nasal prongs.  
- Manometer.  
- Double underwater seal.  

ii. Procedure  
- Assembly of CPAP circuit.  
- Adjust oxygen and air flow requirement according to FiO2 requirement.  
- Set pressure within circuit by adjusting height of underwater seal.  
- Secure nasal prongs properly.  
- Continue close observation.

<table>
<thead>
<tr>
<th>OBSERVATION DURING OXYGEN THERAPY</th>
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<tbody>
<tr>
<td>1 Respiratory rate</td>
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<td>2 Respiratory effort</td>
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a.15. Suctioning

Purpose:
To remove secretion like blood or mucous from the mouth, pharynx or trachea in order to clear airway or obtain a specimen.

1. Procedure
   a. Site
      • Oral
      • Nasal
      • Oro-pharynx
      • Naso-pharynx
      • Trachea
   b. Equipment
      • Suction apparatus
      • Wall or mobile sucker.
      • Suction bottle.
      • Tubing.
      • Suction catheter (appropriate size)
      • Sterile water.
      • Sterile gloves.
      • Resuscitation equipment. (Ambu bag with mask, oxygen supply)
   c. Method Of Suctioning
      • Slightly withdraw the catheter after inserting to the estimated length.
      • Close the port at the Y-connector of the suction catheter with your thumb while withdrawing the catheter.
      • Rotate catheter without releasing the suction pressure and continue rotating while withdrawing the catheter.
   d. Endotracheal Suctioning
      • Check the position of ETT
      • Check for bilateral air entry
      • Hyper oxygenate neonate by increasing oxygen Flow by 0.1 lit.
• Disengage ventilator to disconnect endotracheal tube from ventilator circuit and attach it to bag and mask with oxygen flow rate at 5-6 litre/minute.
• Ask assistant to bag the neonate 5-6 times before disconnecting for suction.
• Insert the catheter to estimated length feeling for any resistant.
• Stop insertion and commence suctioning with proper technique.
• Within 3-5 second withdraw catheter while assistant reconnects to ambu bag or ventilator circuit to reopen and expand the airways.
• Monitor saturation & heart rate.
• Allow 5-6 breaths before repeating the procedure.
• Observe neonate’s color, Sao2, heart rate and respiratory effort.
• Try not to do more than 2 suctioning.
• Reposition neonate with help of assistant making sure that the endotracheal tube stays in position.
• Listen to air entry bilaterally and bases of the lungs.
• Reduce FiO2 to original concentration if saturation is normal.
a.16. Care of Baby Under Phototherapy

1. Place unclothed infant under the light with distance between the light and infant being ideally 45cm. the same can be brought down up to 15 to 20 cm depending on the level of bilirubin.
2. Shield infants’ eyes & genitals to prevent damage.
3. Turn on the photo light. Document the time of infant is under the lamp.
4. Change infant’s position every 2 hours.
5. Monitor temperature of infant closely (4 hourly).
6. Calculate fluid requirements & monitor fluid intake.
7. Observe for the following side effect: -
   a. Changes in feeding and sleeping pattern.
   b. Voiding or stool changes.
   c. Skin changes.
8. Record and report for any abnormalities.
9. Monitor serum bilirubin levels
10. Encourage mother to continue breast-feeding.
a.17. Control of Infection in Nursery

1. Specific Procedures for Sterilization and Disinfection

a. Suction apparatus – suction bottle and tubing
   i. Wash with soap & water. Send for ETO sterilization and other option.
   ii. Rinse thoroughly with boiled water.
   iii. Allow to dry, place in clean dry plastic bag.

b. Ventilator circuit and humidifier apparatus
   i. Corrugated Tubing and rubber tubing with connectors.
   - Soaking in Cidex for 20 minutes.
   - Rinse tubing with boiled water.
   - Allow to dry.
   - Assemble the circuit ready to use.
   - Store exposed end of ventilator circuit in clean dry plastic bag.
   ii. Ventilator Machine
      - Wipe with detergent and rinse well.
      - Use alcohol swab to clean temperature probe and wires.

c. Laryngoscope blades and McGill Forceps
   i. Swab handle of laryngoscope with alcohol 70%
   ii. Clean laryngoscope blades and McGill forceps with alcohol based hand rub and rinse with warm water.

d. Oxygen tubing and humidifier bottle
   i. Change every 24 hours – if used.
   ii. Soak with Germisep for 30 minutes.
   iii. Rinse with boiled water.
   iv. When dry, store apparatus in clean dry plastic bag.

e. Self Inflating Resuscitation Bag and Mask
   i. Cleaned before the next use.
   ii. Wash with hibiscrub and rinse with water.
   iii. Allow to dry.

f. Head Box
i. Daily Cleaning
   • Wipe inner first then outer surface with sterile cloth/gauze moistened with boiled water.

ii. Terminal Cleaning
   • Wash with detergent.
   • Rinse with boiled water and allow drying.
   • Pack in clean dry plastic bag.

g. Thermometer
i. Individualize item.
ii. Store in dry and clean container.
iii. Wipe with alcohol swab before and after use.
iv. Terminal Cleaning – wash with detergent.
v. Rinse with water then disinfect with alcohol for 10 minutes.
vi. Wipe dry with alcohol swab.

h. Incubator, Cots and Infant Warmer
i. Concurrent Cleaning
   • Clean inner surface with sterile cloth/gauze moistened in sterile water/boiled water.
   • Wipe surfaces dry with sterile dry cloth/gauze.
   • Clean outer surfaces with warm water and dry.

ii. Terminal Cleaning
   • Air filter change when surface is discolored.
   • Disassemble all parts.
   • Wash dirty parts with detergent then rinse thoroughly with warm water.
   • Wash other parts with detergent and rinse thoroughly with warm water.
   • Incubator’s body – wash with sterile cloth moistened with detergent and wipe with warm water.
   • Feeding Bottle with Caps and Breast Pump Equipment
iii. Wash with soap then rinse with water.
iv. Soaked in 1 liter of boiled water with 1 tablespoon of sterilizing tablet for at least 20 minutes before next use.

j. Floor
i. Every shift – mop with detergent.
ii. After discharge of every neonate fumigate with bacillocid

k. Contaminated Linen
   i. Put in yellow plastic bag and label.
   ii. Inform the housekeeping staff.

l. Sharps
   i. Discard into sharp bins.
   ii. Never fill the sharp bin more than 3/4th full.
   iii. Ensure proper disposal of sharp bins.

2. Surveillance
   a. Culture taken every month from
      i. NICU
      ii. Nursery
      iii. Milk Room
      iv. Formula Room.
a.18. Specific Procedure of Disinfection and Sterilization

1. Suction Apparatus
   a. All bottle, tubing, connectors and adaptors are changed daily; bottle for rinsing catheter is changed after 8 hours of each suction 8 hours.
   b. Bottle for rinsing catheter
      i. soak with detergent
      ii. Rinse with water
      iii. Dry and autoclave
      iv. Use sterilized bottle for each 24 hrs
   c. Suction bottle and connectors (disposable suction apparatus maybe used as an alternative)
      i. Suction tubing
      ii. Dismantle suction apparatus into basin or pail, avoiding spills on the floor
      iii. Decontaminate by soaking in hypo chlorite or equivalent for 20 minutes and rinse with water thoroughly.
      iv. Wash all apparatus with detergent including the lumen of the tubing using appropriate brushes, rinse with warm water, and drain off all excess water.
      v. Disinfect by soaking apparatus in glutaraldehyde 2% for 20 minutes.
      vi. Remove apparatus with gloved hands and rinse thoroughly with either with freshly boiled water or sterile water.
      vii. Dry with sterile towel
      viii. Drip-dry the tubing.
      ix. Place tubing in clean plastic bag and ready for use

2. Cover and keep all other apparatus in clean dry place.

3. Laryngoscope blades and magillforceps are cleaned and disinfected after each use.
   a. Dis-assembled parts of the laryngoscope, Ma Gill forceps
i. Detach light bulb from blade of laryngoscope (fibreoptic blade does not have a bulb in the blade)
ii. Swab handle of laryngoscope with alcohol 70%
iii. Clean laryngoscope blade and MaGill forceps with
iv. detergent and warm water rinse thoroughly with water.
v. Soak in alcohol 70% for 20 minutes before each use

4. Oxygen tubing and humidifier bottle should be changed every 24 hours.
   a. Dis-assembled apparatus
      i. If apparatus is contaminated with blood, mucus and other discharge, soak in hypo chlorite or equivalent for 20 minutes and rinse with water thoroughly.
      ii. Wash with detergent
      iii. Rinse with water then allow to dry
      iv. When dry, store apparatus in clean dry plastic bag

5. Self-inflating resuscitation bag and mask should be cleaned after each use
   a. Dis-assembled apparatus
      i. Wash with detergent
      ii. Rinse with water
      iii. Allow to dry in clean dry area away from direct sunlight or heat
      iv. Wash storage box with detergent and rinse thoroughly
      v. Allow to dry
      vi. Store apparatus in clean box.

6. Baby Equipment
   a. Heat shield, head box avoid cleaning of heat shield and head box in the alcohol because these agents damage the surface and avoid using lint as fibers may stick to the surfaces of the equipment
      i. Concurrent cleaning
         • Clean daily or whenever contaminated with blood and and body fluids
         • Wipe inner surface first then the outer surface with a sterile cloth moistened with freshly cooled down, boiled water x 8 hourly
      ii. Terminal cleaning
         • Wash with detergent
         • Rinse thoroughly with warm water then allow to dry
- Wipe with glutaraldehyde 2% and leave for 20 minutes
- Rinse off glutaraldehyde 2% with warm water
- Allow to dry in dust free environment
- Pack in clean plastic bag and store in the cupboard.

7. Thermometer
   a. Individualize item for each baby
   b. Store dry in a clean container
   c. Wipe with alcohol swab before and after use
      i. Terminal cleaning
         • Wash with detergent
         • Rinse with water then dry
         • Disinfect with alcohol for 10 minutes
         • Wipe dry with sterile swab, testing for cracks
         • Store in clean dry box.

8. Stethoscope
   a. Individual
      i. Terminal cleaning
         • Remove diaphragm and clean each part with alcohol swab

8. Incubators, cots, and radiant warmers avoid lint
   a. Concurrent cleaning: every shift or when soiled
      i. Clean outer surface with warm water and dry
      ii. Clean inner surface with sterile cloth moistened in sterile water.
      iii. Wipe surface dry with sterile dry cloth
   b. Terminal cleaning
      i. Change air filter every 3 months or according to manufacturer’s instructions or when surfaces are discolored
      ii. Dis-assemble all parts – separate the clean and dirty parts
      iii. Wash dirty parts with detergent then rinse thoroughly with warm water
      iv. Wash the other parts separately with detergent and rinse likewise, allow parts to dry before wiping with 2% glutaraldehyde and leave for 20 minutes
      v. Rinse all parts with warm water and place in clean environment to dry
vi. Take swabs for routine surveillance
vii. Clean others parts of the incubator with detergent and rinse thoroughly with warm water
viii. All wires and cords should be wiped with alcohol swabs
ix. Reassemble equipment when dry and cover with dust proof cover or store in clean, dry, dust free

9. Trolleys and table surface
   a. Daily or prn cleaning
      i. Clean with detergent then rinse thoroughly with warm water and allow to dry
      ii. Disinfect stainless steel trolley surfaces with alcohol swabs.

10. Feed Equipment
    a. The nurse working in the milk room must be personally clean and observe hand-washing practices strictly.
    b. She must wear a cap or keep her hair neat and tidy, and wear mask when preparing feeds.
       i. Feeding tube
          • Preferably discard after each use
          • Alternatively leave in situ and change every 72 hours. For bigger babies it may be left in situ up to 72 hours
       ii. Syringes for tube feeding
          • Use presterile disposable
          • Wash with warm water after each feedings
          • Discard 8 hourly
       iii. Feeding bottles, caps
          • Clean with detergent
          • Rinse with warm water
          • Dry in clean, dry, dust free area
          • Sterilize by soaking in sterilizing solution
       iv. Feeding equipment – kidney dishes, gallipots, trays, medicine cups
          • Change after every feed
          • Dry then pack for sterilization by autoclave
          • Wash with detergent then rinse with warm water
v. Breast pump equipment, tubing, funnel, collecting bottle, kidney dish or tray, canister, Containers for hand Clean expressed milk.

vi. Clean after every use.
- Wash with detergent then rinse with warm water
- Soak in hypochlorite for 20 minutes
- Allow to dry and store in canister which has been autoclave
- Rinse in warm water

vii. Breast pump machine
- Wipe with sterile cloth moistened in freshly boiled or sterile water
- Cover machine when not in use and change cover daily

viii. Milk room walls and floor
- **Daily**
  - Wipe all table surfaces with detergent, rinse with warm water and wipe dry with sterile cloth
  - Wipe surfaces again before preparation of feeds
- **Every shift**
  - Mop floor with detergent and warm water rinse with water

**GENERAL**

11. **Floor**
   a. Every shift
      i. Mop floor with antisepic solution
      ii. Rinse with warm water
b) OPERATION THEATER

b.1. Admission Procedure to Operating Room

Procedure

1. Patient will be seen by surgeon at OPD and decision to admit / or work up as an outpatient will be made.
2. If decision is to work up as an outpatient, then do Investigations as mentioned in Preoperative tests for inpatients.
3. Results of investigations to be seen by M.O
4. M.O & nurse to organize pre anesthetic check up with anesthetist
5. Following this pre-anesthetic check up will be done by anesthetist in the specified area.
6. Upon clearance for surgery admit instructions will be given by the surgeon
7. In the event of an In patient requiring surgery the consultant shall request for pre anesthetic check up after due work up.
8. Pre anesthetic will be done at the bed side & patient will be scheduled for surgery.

a. On admission to the ward:

i. Nurse to follow instructions for pre-op preparation.

ii. Site preparation to be done in the ward (clipping only - no shaving) site will be specified by surgeon/MO.

iii. The patient will be brought to the O.R with the complete patient/pre-op check list records/folder.

iv. The holding room RN or the circulating nurse will check in the patient.

v. Greet the patient with a smile and provide support and reassurance.

vi. Ask patient's name verbally and verify name, medical record number and surgeon with armband and addressograph plate or face sheet.

vii. Check the pre-op check list

viii. Read operative consent for completion and accuracy. Verify that appropriate consents are completed (see appropriate policy) such as sterilization and hysterectomy consent forms.

ix. Read physician's order sheet to verify that all preoperative orders have been completed. All lab and other test results must be on the chart at the time of surgery.

x. Question the patient, if responsive, for the following information:
   • Time of last meal/fluid intake
• Allergies
• Verify surgeon, operative procedure and operative site & prepare the part.
• Check for the presence of prosthetic or loose teeth, contact lenses or intraocular lens implants; prosthesis (arm, leg, eye), wigs, hairpins or clips, jewelry or personal clothing items.

xii. If the patient arrives in the Surgical Services Department with any of the aforementioned items, the following procedure is to be implemented:
• Removable item to be removed and placed in the appropriate container, marked with the patient's name.
• Call the appropriate floor and ask the nurse caring for the patient to come to the operating room and pick up the item. Document the disposition of the item in the nurse's notes.
• The patient's pre-operative nursing assessment shall include physiological and psychological status, social concerns, immediate and emerging needs of the patient. Report any abnormal findings to the anesthesiologist or surgeon and document abnormal findings on the Intraoperative Nursing Record.
• Any abnormalities in lab results must be reported to the anesthesiologist for evaluation.

xiii. The patient may be taken to the assigned operating room when:
• The chart is complete;
• The patient is identified and prepared;
• Anesthesiologist, if required, surgeon and assistant are present.

xiii. If there is a delay, the patient will be kept in the holding room. Make the patient as comfortable as possible by offering a warm blanket and reassurance. The patient will remain under constant observation during the delay.
b.2 Assessment Of Surgical Patients

Purpose:

The purpose of patient assessment is to determine the need for care, the type of care to be provided and the need for further assessment.

Procedure:

1. After admission to the pre-op area, a brief initial assessment is performed by a qualified Registered Nurse. The data obtained includes, but is not limited to:
   a. Proper identification of the patient;
   b. The patient's procedure to be performed as, per the surgeon’s written order, appropriate consent obtained and the patient's understanding of the procedure to be performed;
   c. The patient's known allergies;
   d. Baseline vital signs and cardiac rhythm strip according to age requirement;
   e. The patient's functional status and mobility;
   f. The patient's psychological and emotional status;
   g. Any diagnostic test results relevant to the determination and treatment needs of the patient available on the medical record;
   h. The patient's history and physical examination are completed and placed on the medical record.
b.3. Assessment and Follow up of Post-Surgical Patients in Surgical Area

Purpose:

The purpose of patient assessment is to determine the need for care & the type of care to be provided post-operatively.

1. Procedure:
   a. after transfer to the recovery area, the patient is seen by anesthetist
   b. Once the patient is stable anesthetist authorizes shift to room / ICU.
   c. In the ICU patient is seen by Anesthetist & M.O.
   d. M.O to carry out standard postoperative round, assess & notify the surgeon.
   e. Consultant to see the patient immediately if deviations or as a standard practice within 4hrs post operatively.
b.4. Pathology Specimen

Procedure:

1. Document pathology specimens on the Intra-operative Nursing Record and include all pertinent information.
2. The surgeon has the responsibility for identifying the specimen properly to the circulating nurse.
3. The circulating nurse is responsible for correctly completing the required paperwork and identifying the containers with the proper labels.
4. The scrub nurse must properly handle the specimen from the time of removal until the circulating nurse receives it.
b.5. Patient Positioning During Surgery

Procedure:
1. Proper positioning for a number of different procedures is outlined.
2. Supine position - this is the most common position used. Patients are usually anesthetized in this position and modifications are made after the induction of anesthesia.
3. The position of the head shall place the cervical, thoracic and lumbar vertebrae in a straight, horizontal line.
4. A pillow may be placed under the small of the back to prevent strain on the back, to prevent strain on the back muscles and ligaments.
5. A small pad or pillow placed under the head allows the muscles to relax and prevent neck strain.
6. Hips shall be parallel.
7. Legs are placed parallel and uncrossed to prevent compromised circulation and nerve damage.
   The legs shall be slightly separated so that skin surfaces are not in contact.
8. The safety strap is placed across the thighs so that the patient is secured, ensuring that superficial venous return is not impaired.
9. The heels may need to be padded with foam protectors, if the procedure is expected to be lengthy.
10. Arms are usually placed on arm boards, at less than a 90 degree angle to the body. The palms shall be turned upwards to diminish the pressure on the brachial and ulnar nerve. Foam protectors may be used to pad the elbows if necessary. Table pads and arm board pads should be of the same height.
11. If the head is turned to one side, the bony prominences of the skull and the ears must be padded, to prevent pressure on nerves or blood vessels.
12. The patient's eyes must be protected from pressure and corneal drying or abrasions.
13. Variations of the supine position include Trendelenburg, Reverse Trendelenburg and Fowler's positions. In all of the variations, the principles remain the same. Bony prominences must be well padded and circulation must not be impeded.
   a. Lithotomy position:
      i. With the patient in the supine position, the legs are raised simultaneously and abducted to expose the perineal area. Each leg is raised by grasping the sole of the
foot in one hand and supporting the leg near the knee in the other hand. The leg is raised and the knee flexed slowly.

ii. The foot is secured in the holder by loops of the canvas slings. One loop of the canvas sling is placed around the sole at the metatarsals and the other loop placed around the ankle. The lower part of the leg shall be free from pressure against the leg holders. Foam padding may be needed to protect areas of the leg or foot from excess pressure.

iii. The leg stirrups must be level and the height adjusted to the length of the patient's legs. By placing the patient's anterior iliac spine on a line with the leg holder and the buttocks level and on a line with the edge of the table pad, a good position can be achieved with a minimum of effort.

iv. The patient's position must be symmetrical. The perineum is in line with the longitudinal axis of the table: The pelvis is level and the head and trunk are in a straight line.

v. The arms are placed on the arm boards, using the previously described precautions.

vi. The patient is released from lithotomy position slowly to allow gradual adjustment to the change. The legs are brought down simultaneously to prevent strain on the lumbosacral muscles.

b. Prone position - patient is lying with abdomen on the surface of the operating table.

i. In preparation for placing a patient in prone position, two (2) chest rolls must be made by rolling two (2) bath blankets lengthwise together to form a firm roll. Two pillows

ii. must be available for placement under the patient's feet. The patient is placed supine on a stretcher rather than surgi-lift.

iii. Four (4) people are required to safely place a patient in prone position. The anesthesiologist supports the head and neck. One person stands at the side of the stretcher, with hands at the patient's shoulders and buttocks, to initiate the roll of the patient. A second person stands opposite, at the side of the operating table, with arms extended to support the chest and lower abdomen on outstretched arms, as the patient is rolled forward and over. The third person stands at the foot of the stretcher to support and turn the legs. At the completion of the turn, the stretcher is removed.

iv. The anesthesiologist to ensure maintenance of the airway must coordinate all movements.
v. An arm board is provided on each side of the table and the patient's arms are brought down and forward to rest with elbows flexed and hands pronated at either side of the head.

vi. The head is positioned on a foam pillow or doughnut, keeping the neck in alignment with the spinal column. The eyes are protected from the pillow and the drapes.

vii. Chest rolls should extend from the acromioclavicular joint to the iliac crests to allow movement of the chest for respiration.

viii. One or two pillows are placed under the ankles, to prevent pressure on the toes and feet.

ix. The restraint is placed across the thighs to secure the patient and allow unimpaired venous return.

x. While a patient is in prone position, a firm stretcher must be readily available outside of the room in event of an emergency.

xi. The patient is returned to the supine position by reversing the four-man roll described above.

xii. The arms are placed on the arm boards, using the previously described precautions.

xiii. The patient is released from lithotomy position slowly to allow gradual adjustment to the change. The legs are brought down simultaneously to prevent strain on the lumbosacral muscles.

c. **Prone position** - patient is lying with abdomen on the surface of the operating table.

i. In preparation for placing a patient in prone position, two (2) chest rolls must be made by rolling two (2) bath blankets lengthwise together to form a firm roll. Two pillows must be available for placement under the patient's feet. The patient is placed supine on a stretcher rather than surgi-lift.

ii. Four (4) people are required to safely place a patient in prone position. The anesthesiologist supports the head and neck. One person stands at the side of the stretcher, with hands at the patient's shoulders and buttocks, to initiate the roll of the patient. A second person stands opposite, at the side of the operating table, with arms extended to support the chest and lower abdomen on outstretched arms, as the patient is rolled forward and over. The third person stands at the foot of the stretcher to support and turn the legs. At the completion of the turn, the stretcher is removed.
iii. The anesthesiologist to ensure maintenance of the airway must coordinate all movements.

iv. An arm board is provided on each side of the table and the patient's arms are brought down and forward to rest with elbows flexed and hands pronated at either side of the head.

v. The head is positioned on a foam pillow or doughnut, keeping the neck in alignment with the spinal column. The eyes are protected from the pillow and the drapes.

vi. Chest rolls should extend from the acromioclavicular joint to the iliac crests to allow movement of the chest for respiration.

vii. One or two pillows are placed under the ankles, to prevent pressure on the toes and feet.

viii. The operating room table is flexed to bring the patient's chest and legs down and flex the patient's flank.

d. Fracture Table:

   i. The Operating fracture table allows the patient to be positioned for hip nailing and other orthopedic procedures, requiring C-arm or fluoroscopy.

   ii. The patient rests with the injured leg restrained in a boot-like device. The leg may be rotated, pulled into traction or released, as the surgery requires. The unaffected leg rests in a padded foot holder.

   iii. A center post is placed at the perineum and is well padded.

   iv. The surgeon will be in the operating room during the positioning of the patient on the fracture table.
b.6. Skin Preparation Protocol

Procedure:

1. Explain the procedure to the patient and ensure privacy
2. Lower extremities: Fractured femur: Any upper leg or thigh surgery
3. Hip and Thigh - Remove hair from the waistline to 15 cm (6 inches) below the knee; from 5 cm (2 inches) past the mid-buttock to 5 cm (2 inches) past the mid-abdomen. Include a complete perineal preparation.
4. Knee / Meniscectomy / knee prosthesis . Remove hair from the entire leg from the ankle to the groin.
5. Lower Leg or Foot/ Open reduction of the tibia and fibula/Ankle Surgery : Remove hair from the entire foot and leg to 20 cm (8 inches) above the knee. Clean and trim the toenails and remove nail polish.
6. Foot/ Bunions/Ingrown toenails: Remove hair from the entire foot and leg to the mid-calf. Clean and trim the toenails and remove nail polish.
7. Complete Lower Extremity/ Femoral arterial graft/Ligation and stripping of varicose veins.
8. Remove hair from the entire leg and foot, extending up to a point above the umbilicus, including a complete perineal preparation.
9. Abdomen and Leg/ Femoral popliteal artery surgery/Common iliac artery surgery 
   Prepare the entire abdomen to the bedline on the patient's sides and from the axillae margins extending down the affected side to below the knee and on the other leg to the midthigh. On the back include the buttocks, backs of the legs as far down as on the fronts and a complete perineal preparation.
10. Incision above the umbilicus - Prepare the entire abdomen from the axillae margins to the tops of the thighs, including all visible pubic hair, and to the bedline on the patient's sides.
11. Incision below the umbilicus/ Appendectomy/Hernia repair 
   Prepare the entire abdomen from the nipple line to the midthigh. Include all visible pubic hair, when the legs are together. Prepare to the bedline on each side.
12. Perineal/ Rectal surgery/Vaginal surgery/Prostatectomy 
   Prepare the pubic area (pubes), perineum and inner sides of the thighs and buttocks.
13. Kidney / Rectal surgery/Vaginal surgery/Prostatectomy
   Prepare from 5 cm (2 inches) past the midline of the abdomen to 5 cm (2 inches) past the midline of the back and from the nipple line to the pubes, including visible pubic hair when the legs are together. Include an axilla preparation

   Prepare from 2.5 cm (1 inch) above the external occipital protuberance to the midlumbar area of the back and to the bedline on both sides.

15. Posterior Thoracic and Lumbar Spine/ Thoracic spine surgery/Lumbar spine surgery
   Prepare from the hairline to the bottom of the buttocks and to the bedline on both sides.

   Prepare the back from the axillary line to the midthigh and to the bedline on each side.

17. Lower arm - Remove rings, clean and trim nails and remove nail polish. Check that the identification bracelet is on the unaffected arm. Prepare the whole affected hand and arm up to the shoulder.

18. Upper Arm/ Forearm surgery/Hand surgery/ Shoulder surgery
   Prepare from 5 cm (2 inches) past the midline on the back to 5 cm (2 inches) past the midline of the chest. Include the shoulder, axilla and arm to 5 cm (2 inches) below the elbow.

19. Elbow surgery/ Fracture of the humerus
   Prepare from the shoulder to and including the hand. Include an axilla preparation.

20. Upper Extremity (Entire) - Prepare from 5 cm (2 inches) past the midline on the back to 5 cm (2 inches) past the midline on the chest. Include the complete shoulder, axilla, arm and hand.

   Prepare from the nipple line of the opposite breast over the affected breast to the midline of the back, from the shoulder to the umbilicus, and the whole arm from the shoulder to 2.5 cm (1 inch) below the elbow. Include an axilla preparation.

22. The physician may order a complete chest hair removal and prep (both sides and both shoulders).

23. Neck/ Thyroid surgery/Excision of cyst
   Have male patients shave themselves the morning of surgery, including the mustache.
   Prepare from the bridge of the nose on both sides of the face to the ears and under the chin.
   With blunt-tipped scissors, cut hairs as far up the nares as possible.

25. Mastoid and Ear/ Myringotomy/Mastoidectomy/Stapedectomy
   Clip all visible hair around the external auditory meatus. Comb lacquer into long hair to the
   midline on the operative side; hold the hair away from the area with bobby pins. Repeat on
   the morning of surgery and remove the pins.

26. Skin/ Skin graft/Bone graft
   Check with the physician about the exact area to be prepared.

27. Eye/ Retinal detachment/Cataract - Check with the physician regarding their preference
b.7. Cardiopulmonary Resuscitation in Operating Room

Purpose:

To reinstate cardiopulmonary function on cardiac and/or respiratory arrest victims.

1. Procedure
   a. Prepare and administer medications, as ordered by Anesthetist in charge.
   b. Other drugs requested and not in the crash cart drawer may be obtained from the auxiliary emergency drug box, located on top of crash cart.
   c. Connect patient to monitor if not already done.
   d. ACLS protocol will be followed as per Anesthetist order.
   e. Connect ECG machine for recording electrocardiography and turn on "Lead II." Run tracing continuously throughout procedure.

2. Charting
   a. Throughout cardiopulmonary resuscitation measures, Anesthetist will document:
      i. Medications being administered, with dosage and time;
      ii. Defibrillation, including the number and strength;
      iii. Other procedures being performed (i.e., intubations, arterial blood gases, cut down);
      iv. Patient's response (i.e., state of consciousness, respiration, pulse, blood pressure, skin color).
      v. Record on Nurse's Notes:
         • Patient's condition and/or activities prior to arrest;
         • Time of arrest;
         • Patient responds to the treatment since during the resuscitation;
         • Sample of ECG tracing;
         • Nurse's signature.

3. Cardiopulmonary Resuscitation Report:
   a. Cardiopulmonary Resuscitation Report form is to be filled out by the RN and Anesthetist, immediately following an arrest. Report will be distributed as follows:
      i. One copy on patient chart.
      ii. One copy sent to Manager of Nursing Services.
### NAME OF THE DISTRICT HOSPITAL

<table>
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### NURSING MANUAL

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<th>Reference NABH standard (4th Edition):Nur/Man/o5</th>
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iii. One copy to Pharmacy. At the same time, request a new auxiliary drug box and drug tray.

iv. Cardiopulmonary Resuscitation Follow-up is to be filled out by an Anesthetist immediately following arrest:

v. Form can be found on crash cart.

vi. Completed form is kept in patient’s file.
b.8. Accountability For Sponges, Sharps And Instruments

Purpose:

To provide guidelines of accountability for sponges sharps and instruments used during a surgical procedure. To provide safe practice for the surgical patient, prevent patient injury and adhere to legal standards.

Procedure:

1. Two people, one of whom is an RN, will perform all counts.
2. Counts shall always begin at the surgical field and surrounding area, then to the Mayo stand, then to back table and last the sponges, sharps or instruments discarded from the field.
3. Sponges shall be counted on all procedures.
4. Sponges shall be counted in the OR prior to, during, as needed and at closure by the scrub person and the circulating nurse together. Additional sponge counts are taken before any part of a cavity or a cavity within a cavity is closed (i.e., cesarean section).
5. All sponges inserted into the wound shall be x-ray detectable.
6. Counted sponges shall not be taken from the operating room during a procedure.
7. X-ray detectable sponges shall not be used as dressings.
8. Sponges shall be contained to ensure appropriate infection control technique, ease in counting and proper safe disposal.
9. Sharps shall be counted on all procedures.
10. Sharps include but are not limited to suture needles, scalpel blades, hypodermic needles, cautery blades and safety pins.
11. The scrub person together with the circulating nurse on the procedure shall count sharps in the OR prior to, during and at closure.
12. Suture needles shall be handed to the surgeon on an exchange basis only.
13. Counted sharps shall not be taken from the operating room during a procedure.
14. Sharps broken during a procedure shall be accounted for in their entirety.
15. Sharps are disposed of in the rigid sharps container.
16. Instruments shall be counted on all procedures.
17. Standardization of instrument sets with the number and types of instruments are established for ease in counting.
18. Instruments are counted as they are assembled and a count sheet is inserted in the instrument tray prior to sterilization.

19. The scrub person together with the circulating nurse on procedure counts instruments in the OR prior to the surgical procedure and again during closure.

20. Instruments are not to be taken from the OR during a procedure.

21. Instruments broken or disassembled during a procedure shall be accounted for in their entirety.

22. Instruments are contained to ensure appropriate infection control technique, ease in counting and proper processing.
b.9. Operating Room Techniques

**Purpose:**

To render the operative site as free as possible from transient and resident microorganisms. To ensure a minimal source of infection at the site of the skin incision.

1. **Procedure:**
   a. After the patient has been anesthetized and positioned on the operating table and immediately prior to draping, the skin of the operative site, and the extensive area surrounding it, is mechanically cleansed with an approved antiseptic agent.
   b. Foreign substances must be removed from the skin before the area is mechanically cleansed with the antiseptic solution.
   c. Skin marking by the surgeon is usually done prior to skin prep. If the skin is to be marked after the prep, a sterile marking pen is utilized.

2. **Procedure for clean areas:**
   a. Expose the skin area to be prepared by folding back the blanket and gown as necessary.
   b. A sterile disposable skin prep tray is opened on a small table.
   c. Put on sterile gloves. Place sterile towels above and below area to be cleansed.
   d. Scrub the skin, starting at the site of incision, with circular motion to the periphery. Use enough pressure and friction to remove dirt and microorganisms from the skin and pores.
   e. Discard the sponge after reaching the periphery. Never bring a soiled sponge back toward the center of the area.
   f. Repeat the scrub with a separate sponge for each round.
   g. Document the preoperative skin preparation on the operative nursing note, noting the area prepped, the antimicrobial agents used and development of any skin sensitivity.

3. **Procedure for contaminated areas:**
   a. The following areas within the operative area are considered contaminated:
      i. Umbilicus
      ii. Stoma
      iii. Draining of sinuses
      iv. Skin ulcers
      v. Vagina
vi.  Anus

vii. Traumatic wounds

b. Skin preparation for contaminated area differs. If possible, contaminated areas are sealed off with a towel or sponge, while the remaining skin areas are scrubbed. The most contaminated area is scrubbed last with separate sponges, which are discarded after one-time use.
### b.10. Close Gowning And Surgical Technique

1. Set out enough sterile gowns, gloves and towels for all members of the scrub team.
2. Place a sterile unfolded towel in the hand of each person.
3. The scrub nurse will assist all the persons involved in surgery to put on his/her gown as follows.
   a. Grasp the top of the gown at shoulder seams to armholes.
   b. Insert gloved hands along shoulder seams to armholes.
   c. Slide gown over surgeon’s arms, avoiding touching the surgeon with gloved hands.
4. The circulating nurse will assist the surgeon as follows:
   a. Bring left flap of gown over so it completely covers his back.
   b. Tie the neckline and waistline strings.
   c. The back of the gown is now contaminated. Scrub nurse will assist surgeon with his/her sterile gloves as follows:
      i. Insert fingers of both hands under cuff of right glove, either keeping thumbs away from cuff or tucked under cuff. Spread glove to form a circular opening with thumb of glove facing the surgeon.
      ii. As surgeon inserts his hand into glove, bring the cuff up over the wrist cuff of the gown and releases glove gently.
      iii. The surgeon now will unhook the waist strings at the front of the gown and hands the right string with the paper tab to either the scrub nurse or the circulating nurse.
      iv. The nurse will hold the paper tab while the surgeon pivots to the left. The surgeon then pulls the string to release it from the paper tab and ties the waist string.

**Note:** All Surgical Services Department nursing personnel must be capable of gowning and gloving members of the surgical team.
b.11. House Keeping Procedure

**Purpose:**

To provide, through established practices, policies and schedules, relevant cleaning measures for the control and prevention of infection.

1. **Procedure:**
   a. Housekeeping procedures include cleaning and disinfections/disposal of soiled linen and solid wastes. These procedures are performed by Housekeeping Services personnel assigned to the Surgical Services Department.
   b. Adequate time must be allowed between surgical procedures for the proper cleaning and disinfections of the operating room.
   c. Damp dust all flat surfaces and overhead lights every morning prior to the first surgical procedure. Use a germicide-dampened disposable wipes.
   d. Spraying approved detergent germicide solution onto the surface and wiping it off with dry disposable wipes clean all flat surfaces.
   e. The cleaning sequence is from the periphery of the room to the center of the room.
   f. Flat table surfaces are cleaned first; OR table is cleaned last and a clean sheet is placed on the mattress.
   g. Kick buckets are cleaned as necessary; rolling the wheels over floor cleaning solution cleans Table wheels.
   h. Anesthesia disposable suction containers are removed, if used, discarded and replaced.
   i. Trash, used linen and instruments, which have been previously sealed in plastic bags by Surgical Services Department personnel, are placed on the dirty cart and removed to the soiled utility room for transport to Central Service. Suction containers are sealed and sent out for disposal.
   j. The floor is cleaned with approved detergent germicide and a clean mop head. Ensuring that all floor areas are mopped
   k. The circulating nurse disconnects the suction. Sealed the container and place it on the Central Service cart.
l. All linen is placed in plastic bags and sealed. Scrub nurse's gown is placed in the bag last, after all cleaning is completed.
m. Trash is placed in plastic bags, sealed and placed on the Central Service cart.
n. As much as possible, instruments are to be kept clean during the procedure. At the end of each the procedure, all instruments are placed in the perforated tray, in a sealed plastic bag to be sent to Central Service for processing. A separate plastic bag may be used for basins and other autoclavable items.
o. A suction container is cleaned, disinfected and kept ready for the next procedure.
p. Surgical lights and racks are cleaned.
q. All wall-mounted equipment, view boxes, etc., are cleaned with a detergent germicide solution and disposable wipes.
r. Kick buckets are thoroughly cleaned with detergent germicide; Walls are cleaned as necessary.
s. Cabinet doors and handles are cleaned; Entire floor space is mopped with detergent germicide.
t. Scrub sinks, faucets, soap dispensers and surrounding walls are cleaned.
u. Instruments and other reusable autoclavable equipment will be decontaminated before washing. Nonautoclavable items will be placed in yellow bags for decontamination in Central Service.
b.12 Verification On Infection Control

1. Check for validity of the informed consent against the following criteria:
2. Information has been provided to the patient prior to the anesthesia or procedure;
3. Has been explained to the patient by the anesthesiologist and/or the surgeon;
4. The blanks have been filled in with the necessary information; and all the signatures required have been obtained.
5. State the name of the surgeon or other practitioner who has primary responsibility for the patient's care;
6. Identify the professional status of individuals responsible for authorizing and performing treatments and procedures.

a. Duration Of Informed Consent:
   i. Has continuing force and effect until the patient revokes the consent;
   ii. Circumstances have changed which would affect the nature of, or the risks of the procedure and/or the alternatives to the procedure for which the patient gave the consent.
   iii. Informed consent form is prepared by the attending physician or operating surgeon and is discussed with the patient by the physician/surgeon.
   iv. Supplemented with verbal discussion;
   v. Supplemented through written additions that give further information relevant to the patient's condition. Consent, validity is 2 weeks.

b. Any special circumstances:
   i. The patient signs where indicated and receives a copy of the informed consent. The anesthesiologist and/or surgeon obtaining the consent signs in the appropriate location.
   ii. The nurse witnessing the signature of the patient signs as a witness stating date and time of witnessing the signature.
   iii. If a translator is used in the process, the translator signs in the area designated for party other than the patient.
   iv. Third party consent for an incompetent or minor patient is to be obtained following the same procedure. An informed consent for anesthesia and/or any procedure must be obtained from the third party.
   v. The original copy of the informed consent must be placed in the medical record before the anesthesia or procedure is performed.

c. Role of Name of Your Institution in the Informed Consent Process:
i. Limited to obtaining verification that consent has been obtained by the anesthesiologist and/or surgeon before the surgeon is permitted to administer anesthesia and/or perform the procedure.

ii. Name of Your Institution personnel may not answer patient's questions about the nature of the anesthesia or procedure and its benefits or risks or alternatives.

iii. Hospital personnel will refer all questions of significant nature to the anesthesiologist or surgeon to enable him/her to provide informed consent:

iv. Verifies that a witness was present during the time that the patient received the information constituting an informed consent;

v. Verifies that a witness was present during the time that the patient signed the informed consent.
b.13. Standard Precautions

Procedure

Standard Precautions include the following:

1. **Hand washing**
   a. Hands are to be washed after touching blood, body fluids, secretions, excretions or other contaminated items, whether or not gloves have been worn.
   b. Hands must be washed immediately after removal of gloves, between any patient contact and when otherwise indicated. This will help prevent transmission of microorganisms.
   c. To prevent cross contamination of different body sites on the same patient, it may be necessary to wash hands between tasks and procedures.

2. **Gloves**
   a. Gloves are to be worn when touching blood, body fluids, secretions, excretions and other contaminated items. Clean, non-sterile gloves will be adequate.
   b. Gloves shall be changed between tasks and procedures on the same patient after contact with material that may contain a high concentration of microorganisms.

3. **Mask, Eye Protection, Face Shields**
   a. When performing procedures that may be likely to generate splashes or sprays of blood, body fluids, secretions or excretions, wear a mask and eye protection or a face shield. This will protect the mucous membranes of the eyes, nose and mouth.

4. **Gowns**
   a. When performing procedures that may be likely to generate splashes or sprays of blood, body fluids, secretions or excretions, wear a gown to protect the skin and to prevent soiling of clothing.
   b. Always remove the soiled gown as soon as possible and wash hands.

5. **Patient Care Equipment**
   a. All patient care equipment that is soiled with blood, body fluids, secretions or excretions shall be handled in a manner that will prevent skin and mucous membrane exposures.
   b. Single use, disposable items must be disposed of properly.
   c. Make sure that reusable equipment has been cleaned and reprocessed appropriately, prior to use on another patient.
6. Environmental Controls
   a. Make sure that the adequate procedures and that they are followed for the routine cleaning of all surfaces, including beds, bedrails, bedside equipment and other frequently touched surfaces.

7. Linen
   a. Used linen soiled with blood, body fluids, secretions and excretions will be handled, transported and processed in a way that prevents skin and mucous membrane exposure, contamination of clothing and the transfer of microorganisms to other patients and the environment.

8. Occupational Health and Blood borne Pathogens
   a. Avoid injuries if at all possible when using needles, scalpels and other sharp instruments.
   b. Never recap needles; use a one-handed scoop technique or a mechanical device for holding the needle sheath.
   c. Place all contaminated needles, syringes, scalpel blades and other sharp items in designated puncture-resistant containers. These containers should be located as close as possible to the area where the items are used.
   d. Instead of doing mouth-to-mouth resuscitation, use mouthpieces, resuscitation bags or other ventilation devices when the need for resuscitation is anticipated.

9. Patient Placement
   a. Ensure that patients, who may contaminate the environment or who do not (or cannot be expected to) assist in maintaining appropriate hygiene, are placed in a private room. Consult with your infection control professionals on patient placement, if a private room is not available.
b.14. Gowning And Gloving Technique

**Procedure:**

1. Set out enough sterile gowns, gloves and towels for all members of the scrub team.
2. Place a sterile unfolded towel in the hand of each person.
3. The scrub nurse will assist each person put on his/her gown as follows:
4. Grasp the top of the gown at shoulder seams to armholes.
5. Insert gloved hands along shoulder seams to armholes.
6. Slide gown over surgeon's arms, avoiding touching the surgeon with gloved hands.
7. The circulating nurse will assist the surgeon as follows:
8. Bring left flap of gown over so it completely covers his back.
9. Tie the neckline and waistline strings.
10. The back of the gown is now contaminated.
11. Scrub nurse will assist surgeon with his/her sterile gloves as follows:
12. Insert fingers of both hands under cuff of right glove, either keeping thumbs away from cuff or tucked under cuff.
13. Spread glove to form a circular opening with thumb of glove facing the surgeon.
b.15. Flash Sterilization

Procedure

1. All items to be flash autoclaved must be able to withstand steam under pressure without being damaged.

2. Items to be sterilized will be placed in a metal pan prior to being placed in the autoclave. All box locks will be opened. No towels or porous items will be used in the flash autoclave. Wrappers shall not be used unless the sterilizer is designed and labeled for this use.

3. Place a sterility indicator in each tray of items to be sterilized. A new indicator must be used for each autoclave cycle and used according to the manufacturer's instructions.

4. Place the pan in the autoclave chamber. Follow instrument, container and sterilizer manufacturer's instructions for exposure times and temperature relationships. The most rigorous values shall be used when sterilizing instruments of different exposure time recommendations.

5. Implants shall not be flash sterilized because of the increased risk of patient infection.

6. Biologically monitor flash sterilizers daily. Use only biological indicators intended for flash sterilizers.

7. Any potential sterilizer failure will be reported to the OT Charge Nurse.
b.16. Infection Control Surveillance

**Purpose:**

To minimize infection in the surgical patient; to improve wound healing; to minimize disability, morbidity and mortality; to reduce cost of hospitalization.

1. **Procedure:**

   Barriers for isolating the operative wound from infectious contaminants are as follows:

   a. Skin Barriers: Preoperative skin preparation of the patient and operating team;
   b. Special OR attire; Sterile drapes to cover the patient and sterile field;
   c. Occlusion of incised skin edges from the operative wound;
   d. Adherence to operative aseptic technique.
   e. Barriers to Nasopharyngeal Flora and Hair:
   f. Wearing of masks and hoods; Removal of hair from operative site;
   g. Exclusion from the OR of personnel with an acute infection or skin lesion;
   h. Use of an anesthesia screen to separate anesthesia area from sterile area.
   i. Barrier to Fomites: Dust covers to be used over sterile items in storage
   j. Proper packaging of supplies and sterilization procedure
   k. Enclosed cabinets or carts for storage of sterile supplies;
   l. Clean preoperative bed linen; Barriers to Airborne Contamination:
   m. Disinfections of OR surface following every surgical procedure.
   n. Maintenance of effective ventilation and air conditioning systems;
   o. Adherence to OR "Traffic and Visitors Control" policy.
   p. Protective Eye Shields: Eye shields must be worn during the direct care of all patients.
b.17. Employee Infection Control

Purpose:

To establish the mechanism for reporting an employee injury from needle puncture. And /or accidental blood or body fluid exposure.

1. Procedure:
   a. All personnel shall take precautions to prevent needle punctures or injuries. Should they occur; the following procedures shall be strictly adhered to.
   b. If a glove is torn or a needle stick or other injury occurs, the following shall be done:
      i. Remove the damaged glove as promptly as possible.
      ii. Wash hands thoroughly.
   c. The appropriate employee injury form shall be submitted, with copies routed as indicated to Personnel and Nurse Manager.

2. Immediate clinical action:
   a. Encourage bleeding, washes with soap water, then clean with spirit
   b. Splashes of blood or body fluids in the mouth should be washed thoroughly with copious amounts of Water.
   c. Splashes of blood or body fluids into the eyes should be irrigated well with normal saline

3. Reporting: (This is essential in every case)
   a. All Incidents should be reported to the manager or supervisor
   b. Subsequent action will depend on the nature of the exposure and the likelihood of “Source”
b.18. Surgical Hand Scrub

**Procedure**

**Preparation:**

1. Adjust water temperature.
2. Keep arms level and well away from body and hands up above elbows for duration of scrub.
3. Prewash:
   a. Wet hands and forearms.
   b. Apply sufficient water and work up lather.
   c. Wash from fingertips to three inches above elbows.
   d. Clean nails and subungual areas.
   e. Rinse hands and forearms thoroughly.
4. Surgical Scrub:
   a. Scrub hands and forearms, to two (2) inches above elbow.
   b. Fingernails of hand #1 - using 15 strokes.
   c. Begin with palm of hand #1 - apply 9 strokes to each of 3 areas of fingers and hand.
   d. Repeat above steps for hand #2.
   e. Scrub backsides of hand #1 - apply 9 strokes to each of 3 areas of fingers and hand.
   f. Scrub arm #1 from wrist to forearm.
   g. Scrub arm #2 from wrist to forearm.
   h. Scrub arm #1 from forearm to elbow.
   i. Scrub arm #2 from forearm to elbow.
   j. Rinse hands and arms thoroughly, keeping hands raised.
   k. Turn off water, using foot control.
   l. Proceed to OR, keeping hands above the elbows and out from scrub clothes.
b.19. Hand Washing

Purpose

To provide guidelines for effective hand washing, in order to prevent or reduce the occurrences of cross infections

1. Procedure:
   a. Keep clothing away from sink and splashes.
   b. Wear minimal jewelry; clean fingernail area (bacteria may be harbored beneath fingernails).
   c. Turn on water and adjust temperature for your comfort.
   d. Wet hands and apply approximately 1 teaspoon of soap to hands. Lather well (soap reduces surface tension enabling the removal of bacteria).
   e. Wash hands thoroughly, using rigorous scrubbing action for at least 15 seconds. Work lather around fingernails, top of hands, etc. (to facilitate eradication of all bacteria).
   f. Rinse hands and wrists under running water.
   g. Repeat hand washing technique, if necessary (to prevent recontamination of hands).
   h. Dry hands with clean paper towel.
   i. Turn off faucets with used paper towel and discard.
b.20. Handling of Biohazardous Waste Materials

Purpose:

To provide guidelines for the handling and disposal of all waste in accordance with the State Health and Safety Code.

1. Procedure:
   a. Biohazardous waste shall be segregated from other non-biohazardous medical waste at any point of origin, in plastic bags located in designated-covered waste containers.
   b. Containers used for biohazardous waste shall be so secured as to deny access to unauthorized persons.
   c. Biohazardous waste shall be single-bagged prior to disposal and should not be stored for more than one (1) day, other than needles and sharps.
   d. Disposal of Sharps:
      i. Biohazardous sharps waste disposal containers should be of hard plastic containing with a small opening for disposing of needles, sharps and blood specimens.
      ii. Used needles, syringes, lancets, and scalpels should be used only disposed biohazard container.
      iii. Never recap a contaminated needle or reach inside the container. Drop used syringes, scalpels, lancets into the container. Snap on or tape the lid every 48 hrs container, prior to discarding.
      iv. Never dispose of syringes are needles in a general trash receptacle.
      v. Follow needle stick policy, if injured by contaminated needle.
Disposal of Sharps

**Purpose:**

To prevent injury and exposure, to blood borne infections, for personnel handling sharps including needles, syringes, knife blades and opened ampules of medication.

1. **Procedure:**

   a. All sharps, including hypodermic needles and syringes, suture needles, knife blades, trocars from drains and opened glass ampules of medicine will be disposed of into plastic sharps containers.
   
   b. After syringe/needle use DO NOT RECAP.
   
   c. The sharps will be placed into contaminated sharps container at completion of procedure.
   
   d. Opened glass ampules from anesthesia use will be handled carefully. All medication shall be removed from an ampule and the ampule placed into contaminated sharps container. If unopened, ampules can be saved. They shall be wiped with approved germicide and placed in the appropriate area. If the medication is not to be used elsewhere, the ampule shall be carefully opened and the medication discarded, prior to disposal in the contaminated sharps container.
   
   e. **PRECAUTIONARY MEASURES:**
      
      i. Under no circumstances shall sharps be discarded into waste or trash containers.
      
      ii. Bare needles will not be left on IV poles, instrument trays or any place that may pose a hazard to personnel, patients or visitors. DO NOT RECAP NEEDLES. This is the single most important cause of needle puncture injury.
c. Gyne & Obst

**c.1 Admission Procedure for Maternity patients**

1. Patients who have been scheduled for Induction of Labour by their Obstetricians are to register at the Admission Counter prior to being taken to the Delivery Room.

2. Patients who are 36 weeks pregnant and above and in established labour are to be escorted to the Delivery Room while their husbands/relatives do the registration either at the Admission Counter.

3. Patients (regardless of gestational age) who are uncertain about their conditions and would like to be assessed or advised will have to go through our duty doctor in emergency alternatively OPD.

4. If they are not already under any particular obstetrician, then they may want to get registered under one of our obstetricians in the Out-Patient Department. The duty doctor after assessing, the patient will then consult the relevant obstetrician. This also applies after office hours. Patient will either be admitted to the Ward/Delivery Room or Discharged as per the obstetrician’s order.
c.2 Admission History and Physical

Purpose
Upon admission to the Labour unit, a complete history and physical exam will be performed unless patient presents in very active labor or delivery is imminent.

1. Procedure
   a. Review patient’s history for the following items:
      i. Identifying information such as name, age, gravidity, parity (including the number of full-term births, pre-term births and spontaneous and therapeutic abortions), last menstrual period and estimated date of delivery;
      ii. History of current pregnancy including prenatal care, laboratory work, special tests, drugs taken and (amniocentesis, sonography), details of any complications or problems and their treatment and a complete review of the prenatal record, if available;
      iii. History of past pregnancies including number, previous complications, size of infant(s), birth intervals, type of delivery, length of labor and condition of children, i.e., normal term, premature, congenital defects, early death (sudden infant death syndrome);
      iv. Medical and family history (obtained from the prenatal chart) including drug allergies, other allergies, previous blood transfusions and major medical problems (should be reconfirmed with the patient);
      v. If unbooked/ migrated case, transfer information to an intrapartum Obstetric sheet.
   b. Perform systems assessment as follows:
      i. Assessment of vital signs including temperature, pulse and respiration;
      ii. Assessment of blood pressure in a sitting position and left lateral position;
   c. Obtain current labor history to include, but not limited to:
      i. Onset of contractions;
      ii. Bloody show
      iii. Rupture of membranes;
      iv. Frequency, duration and intensity of contractions.
   d. Perform abdominal exam including the following:
      i. General observation of the abdomen for scars, contour and size;
ii. Abdominal palpitation for fetal presentation, lie, position, estimated size and station (fetal head floating or fixed);

iii. Fundal measurement (to be compared with weeks of gestation and used in assessment of fetal size);

iv. Assessment of pattern, strength and duration of contractions;

v. Assessment of pelvic capacity, including reevaluation of diagonal conjugate, bluntness or prominence of ischial spines, mobility of the coccyx and angle of the pubic arch;

vi. Auscultation, Doppler or external electronic monitoring of fetal heart rate;

vii. Observation of any fetal movement, FHR

e. Perform pelvic exam including assessment of the following:

i. Cervical effacement and dilatation;

ii. Position of the cervix (anterior, posterior or mid-position);

iii. Fetal station;

iv. Presenting part and position, if possible;

v. Status of amniotic membranes;

vi. Pelvic capacity;

c.3 Amniotomy

1. Equipment / Supplies
   a. Sterile glove
   b. Lubricant or Betadine spray
   c. Amnihook
   d. Fetal scalp electrode (if needed)

2. Observe for
   a. Prolapse of the umbilical cord;
   b. Meconium-stained amniotic fluid;
   c. Oligohydramnios or polyhydramnios.
   d. Abnormal foul smelling amniotic fluid.

3. Procedure:
   a. Explain the procedure to the patient, stating that there are no nerve endings in the amniotic membranes, thus there is no more discomfort than experiencing a vaginal examination.
   b. Position the patient in dorsal recumbent position.
   c. Change pad under patient’s buttocks, explaining that water will continue to come out during the remainder of the labor process, as fluid is continually manufactured until delivery.
   d. Assess fetal heart rate and document procedure on fetal monitor strip and on labor room record, noting amount and color of amniotic fluid. Document post procedure fetal heart rate.
c.4 Assessment Early / False labor

Purpose

To provide an accurate assessment of the patient’s labor status & to provide support and reassurance for the patient in early labor.

1. Procedure:
   
a. The Nurse on duty will assess patients who are admitted in early labor.
b. The Nurse will do the patients observations on temperature, pulse, blood pressure, fetal heart rate and uterine activity.
c. The Gynecology MO, after going through the patient’s Antenatal History will perform a vaginal examination unless contraindicated as in placenta praevia.
d. After the vaginal examination, the MO will notify the obstetrician of the patient’s labor status.
e. Obstetrician will then order patient either for acceleration of labor, discharge home or to be admitted to the Ob/Gynae Ward to be observed until labor is established.
c.5 Assessment - Preterm Labor, Level 1 Facility

Purpose:

Ante partum patients less than 34-36 weeks pregnant who present themselves to the Labor Room will be assessed and, if deemed stable (dependent on time factor and precipitous delivery), transferred to a facility capable of providing optimum care for the patient and her unborn baby. Neonatology transfer team will arrive for delivery and immediately after will transport the infant to a NICU.

1. Procedure:

   a. Evaluate uterine activity:
      i.   Apply external fetal monitor.
      ii.  Evaluate and document variability of fetal heart rate.
      iii. Palpate and assess fundus to determine strength of contractions.

   b. Obtain an obstetrical history through the Obstetrician Antenatal records.

   c. Do a sterile per speculum/ vaginal examination to determine cervical effacement and dilatation unless contra indicated e.g. in APH cases. HVS if necessary to be taken.

   d. Assess patient behavior and knowledge of condition:
      i.   Keep patient and significant others informed of fetal status.
      ii.  Not applicable.
c.6 Fetal Cardiotocography (FCIG)

Purpose:

Method of determining fetal well-being by observing response of fetal heart rate to fetal movement.

1. Procedure:
   a. Provide a non-stressful atmosphere to:
      i. Obtain patient history.
      ii. Obtain baseline vital signs.
   b. Begin patient/family teaching record.
   c. Place on external fetal monitor, positioning for best recording. Position the patient in the semi-Fowler’s or left lateral recumbent position. The supine position should be avoided. Obstruction of blood flow to uterus should be avoided.
   d. Determine baseline fetal heart rate and variability. Record fetal movements on the monitor tracing.
   e. Attempt to find 10-minute period of activity in forty minutes.
   f. Fetal activity is usually in cycles of 20 to 40 minutes with longer or shorter cycles occurring.
   g. An inactive fetus may be stimulated to move by:
      i. Sound;
      ii. Vibration;
      iii. Manipulation of maternal abdomen;
      iv. Clear liquids high in sugar, especially if patient hasn’t eaten within two hours of test;
      v. Response should be recorded as reactive to external stimuli.
   h. External fetal heart rate testing can produce falsely increased variability. If less than normal variability noted, it is generally correct.
   i. If non-reactive, continue observation of FHR accelerations for 40 minutes. If the fetus remains non-reactive, further fetal evaluation is indicated.
   j. Interpretation:
      i. Negative Non-stress Test: Two or more FHR accelerations of at least 15 beats per minute (BPM) above the baseline, lasting a minimum of 15 seconds in a 10-20 minute observation period. This is also called a Reactive Non-stress Test.
ii. Equivocal Non-stress Test: Late decelerations are not repetitive or hyper contractility results in fetal bradycardia. This is also called a Non-reassuring Non-stress Test.

iii. Positive Non-stress Test: Fails to meet reactive criteria during 40 minutes observation period. This is also called a Non-reactive Non-stress Test.
c.7 Assessment Progress of Labor

1. Place the patient comfortable in a supine position with legs flexed and separate. A pillow should be used to support her head;
2. Place a small pillow or rolled towel under the patient’s right hip;
3. Explain that the vaginal examination will allow an assessment of progress in labor and while it may be uncomfortable, should not cause pain;
4. Put on a sterile glove;
5. Lubricate the gloved examining hand;
6. Use sterile water as a lubricant if rupture of membranes has yet to be determined;
7. Place index and middle fingers into the vagina with slight downward pressure. Pause briefly. Then advance the fingers and rotate the hand so that the thumb rests outside and above the symphysis pubis;
8. After inserting the two fingers in the vagina, place the other hand on the mother’s abdomen to allow slight downward pressure on the fundus.
9. Advance the examining fingers so that the cervix can be felt. This pressure may be uncomfortable, especially during a contraction. Encourage relaxation techniques and reassure her during the examination;
10. Make the following assessments:
   a. Status of cervix (dilatation/effacement/consistency/position);
   b. Fetal presentation (head/breech/shoulder);
   c. Fetal position (left/right/anterior/posterior);
   d. Fetal station (floating/ballotable/engaged);
   e. Status of membranes (intact/ruptured/bulging).
11. Remove the examining fingers gently and explain the findings to the woman;
12. Dry the perineal area and place clean absorbent pads under the buttocks. Help the woman to a comfortable position;
13. If unable to assess presenting part, to inform the obstetrician concerned.
Partograph:

![Partograph](image)

**Figure 1. Partograph**

A partogram or **partograph** is a composite graphical record of key data (maternal and fetal) during labour entered against time on a single sheet of paper.

**Purpose:**

- In a pictorial overview, the **partogram** graphically displays the dynamics of labor during the first stage of delivery.
- It records fetal condition, labor progress, and maternal condition with the **aim** of alerting health professionals to any problems with the mother or baby.

**Advantages of parto-graph plotting:**

- Partograph can provide details necessary information about maternal and fetal condition at a glance.
- It helps early detection of normal and abnormal progress of labor. So, that appropriate steps can be taken in time.
- It is possible to estimate the expected time of delivery, in case of everything is normal.
- It serves an early warning in case of impending problem.
- It helps to detect prolonged and obstructed labor and cephalo-pelvic disproportion earlier.
- It facilitates handover formalities of medical and nursing staff.
- It helps to detect the timing of transfer, augmentation and termination of labor if needed.
- It helps to transfer the high risk clients during labor immediately from community to hospital.
• It helps to reduce the incidence of caesarean section rate.
• Ultimately, it helps to reduce the incidence of maternal and perinatal mortality and morbidity

**Equipment’s needed for partograph plotting**

- Partograph sheet
- Stethoscope or Doppler machine
- Gloves
- Blood pressure cup or sphygmomanometer
- Thermometer
- Drug if prescribed
- Watch
- Pen

**Component of Partograph:**

The component of partograph are given bellow:-

- **Particulars of patients:** includes name, para, gravida, registration/hospital number, date and time of admission, time of rupture membrane is written at the top of the graph.
- **Fetal condition/fetal part**
- **Fetal heart rate:** Fetal heart rate is recorded half hourly and plotted by
- **Colour and amount of liquor:** Record the colour at every vaginal examination. Amniotic fluid is observed and recorded by-
  - If membranes are intact then marked I
  - When membranes are ruptured then marked by-
  - Clear fluid then marked by -C
  - Meconium stained –M
  - Blood stained – B

**Molding of the fetal skull:**

This is the extent to which the bones of the fetal skull are overlapping each other as the baby’s head. You should assess the degree of moulding initially and every 4 hours. The degree of moulding recorded as-

<table>
<thead>
<tr>
<th>Value</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Cranial bones are separated and the suture can be felt easily</td>
</tr>
<tr>
<td>+</td>
<td>Bones are just touching each other</td>
</tr>
<tr>
<td>++</td>
<td>Bones are little overlapping</td>
</tr>
<tr>
<td>+++</td>
<td>Bones are overlapping severely and cannot be pushed level with the fingers</td>
</tr>
</tbody>
</table>

**Progress of labor/ Labor part:**

- **Cervical dilatation:** The dilation are plotted with X. When the cervical dilatation is 4 cm then the partograph will be started and further examination made every 4 hourly. The first plotting should be on the alert line.
- Time: Recorded at hourly interval.
- Descend of the head: The descend of the head is plotted with . Descent of head measured in fifth by bimanual abdominal palpation. The descent of the head recorded as-

<table>
<thead>
<tr>
<th></th>
<th>0/5</th>
<th>1/5</th>
<th>2/5</th>
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<tr>
<td>“Floating” above</td>
<td>“Fixing”</td>
<td>Not engaged</td>
<td>Just engaged</td>
<td>Engaged</td>
<td>Deeply engaged</td>
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<td>the brim</td>
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</tr>
</tbody>
</table>

- Uterine contraction: Shade one squire for each contraction recorded. Plotted every half an hour. Plotted the number of contraction per 10 minutes and their duration with seconds.
- Mild contraction- duration if less than 20 seconds then plotted by
- Moderate contraction- If duration is 20-40 seconds the plotted by oblique line (zebra crossing)
- Strong contraction: If more than 40 seconds filled by dark shade

Maternal condition/ part

- Oxytocin: The concentration of oxytocin is noted on the upperline and the rate of infusion in drops/min. on the bottom line.
- Drugs and I.V fluid: All drugs and I.V fluid given during labor, their dosage and route of administration are recorded.
- Pulse and blood pressure: The pulse is recorded every 30 minutes and the BP every 2 hourly.
- Temperature: The maternal temperature is recorded in the bottom line.
- Urine: The amount of urine passes is measured and recorded. If catheterization performed it is recorded as “C”.

Figure 2. Factors affecting use of Partograph.
c.8 Stages of Labor- Patient Observation and Care

Purpose:

Labor and Delivery patients will be observed and cared for during the labor process while ruling out high risk factors.

1. Procedure:

   a. Assess for:

      i. Fetal Risk Factors:
          - Fetal intolerance to labor (Fetal Distress);
          - Fetal tachycardia above 160 beats per minute;
          - Fetal bradycardia below 120 beats per minute;
          - Foul Smelling/meconium stained amniotic fluid;
          - Fetal hyperactivity;
          - Abnormal fetal position.

      ii. Maternal Risk Factors:
          - Pregnancy induced hypertension;
          - Gestational diabetes;
          - Grand multiparity;
          - Pre-term labor;
          - Inadequate uterine relaxation:
              - Contractions lasting longer than 90 seconds;
              - Relaxation between contractions less than 30 seconds.
          - Hemorrhage;
          - Supine hypotension.

   b. Care of the Patient

   c. Latent Phase:
      - Dilation 0 to 4 cm with mild to moderate irregular contractions. Note frequency, duration and strength of contractions every half hour:
        - Use continuous electronic fetal monitoring if the needs arise;
        - Check BP and P hourly or PRN if condition indicates;
        - Check TPR every 2 – 4 hours and PRN;
Give enema as ordered;
Have patient void every 2 hours and PRN;
Teach breathing techniques to be used in active labor to patient and spouse/significant other;
Allay anxiety as much as possible by explaining all procedures;
Maintain bed rest, if ordered, or allow patient to ambulate if membranes are intact;
Encourage spouse to remain with patient to provide support during labor;
Provide supportive care based on patient’s knowledge of labor process;
Reduce environmental stimuli that may contribute to anxiety and tension, providing a relaxed and restful atmosphere;
At appropriate intervals, encourage patient that labor is progressing and that both patient and baby are doing fine;
Clip calls light to bottom sheet within easy reach of patient.

i. Active Phase:
- Dilation 4 – 8 cm with moderate to strong regular contractions every 2 to 5 minutes:
  - Maintain bed rest, if ordered, with side rails up. May ambulate to bathroom to void unless contra-indicated;
  - Small amount of water unless patient has order to be kept nil orally;
  - Administer parenteral fluids as ordered;
  - If patient has elevated BP and/or is on maximum dose of oxytocin (Pitocin), then check BP every half to hourly as condition indicates;
  - Note frequency, duration and strength of contractions and fetal heart rate every 30 minutes and PRN;
  - Have patient void PRN;
  - Apply pressure to sacrum as needing during contraction and PRN;
  - Change pad under buttocks PRN;
  - Assist with breathing techniques.

ii. Transition Phase:
- Dilation 8 to 10 cm (complete dilatation) with strong contractions:
  - Continue with active labor care;
  - Encourage deep breathing prior to and after each contraction;
• Have patient avoid urge to push by panting and/or blowing in rapid sequence with contractions until completely dilated;

• If chilling occurs, cover patient’s feet with a blanket or have patient wear socks;

• Inform patient that this stage usually lasts about 1 hour and then she will be allowed to push.

• Focus on patient and support her, using a calm voice and positive reinforcement after contractions.
c.9 Care And Observation Of Patient In Labor

Purpose

Patient in Labor will be observed and supported to enhance a safe delivery.

1. Procedure:

   a. Explain course of normal labor/delivery and recovery process.
   b. Encourage relaxation during contractions.
   c. Advise regarding availability of medication for discomfort.
   d. Reassure that husband may remain in room.
   e. Observe fetal Heart Rate, close monitoring of any irregularities (CTG-Monitoring)
      i. Every 1 hour if patient in early labor;
      ii. Continuous during active labor;
      iii. Every 15 minutes if situation warrants – e.g. meconium stained liquor/intrauterine growth retardation.
   f. Observe duration and intensity of contractions every 30 minutes of PRN if in early labor.
   g. Notify obstetrician if contractions suddenly become either less or more frequent or severe.
   h. Take BP every 2-4 hours and more frequently if situation warrants e.g. in epidural cases or patient with PIH.
   i. Provide patient with sips of water or ice chips as allowed.
   j. Encourage patient to void every 2 hours or more often if bladder appears distended. If unable to void (notify obstetrician) catheterisation may be necessary.
   k. Encourage change of position to relieve backaches by encouraging to lie on left lateral position and/or by giving back rubs.
   l. Provide oral hygiene as indicated.
   m. Observe for SRM(Spontaneous Rupture of Membranes) and note colour of liquor:
      i. When SRM(Spontaneous Rupture of Membranes) occurs, to check fetal heart rate immediately
      ii. Do a VE(Vaginal Examination) to exclude cord prolapse.
   n. Observe for bloody “show”:
      i. True “show” is mucoid in consistency;
      ii. Bleeding other than bloody “show” may be due to tiny lacerations of the Cx or premature separation of the placenta.
o. Observe for desire to “bear down” or patients desire to empty bowels:
   i. This is usually a sign that birth is imminent;
   ii. Discourage bearing down unless Cx is fully dilated (by doing a Vag. Assessment);
   iii. Observe also for perineal dilatation. Call obstetrician early.

p. Observe for signs of complications or change in patient’s condition, administer oxygen if necessary:
   i. Prolapsed cord – tip bed with head down or place patient in knee chest position if possible. Push presenting part to alleviate pressure on cord, if possible. Meanwhile, someone inform obstetrician immediately;
   ii. Extreme restlessness or any evidence of unusual distress - notify obstetrician immediately;
   iii. Extreme variation in F.H.R. for no particular reason - notify obstetrician immediately;

q. Increase in Temp (38°C), Pulse + BP (greater than 140/90).

r. Maintain IVF as ordered.

s. If oxytocics are being administered, observe patient closely.
c.10 Placenta Examination

Purpose:
The placenta will be examined for completeness and abnormalities.

1. Procedure:
   a. With the placenta maternal side down, grasp the membranes and approximate the edges to determine if they are complete.
   b. Inspect the fetal side:
      i. Check the location of the insertion of the cord (central, marginal or velamentous);
      ii. Trace blood vessels to the periphery to detect any torn vessels, which might indicate a succenturiate or extra lobe of the placenta.
   c. Inspect the maternal surface:
      i. Check the placental cotyledons to determine if they are present and intact.
      ii. Observe for areas of abruption, infarction or calcification.
   d. Inspect the umbilical cord:
      i. Check the number of blood vessels (2 arteries and 1 vein).
      ii. Check the length of the cord (appropriate, long or short).
   e. Report and document any abnormalities.
c.11 Ruptured Membranes - Care of the Patient

1. A patient suspected of having ruptured membranes, who is not in active labor, shall have an initial sterile vaginal examination to determine patient’s status and to exclude cord prolapse.

2. If ruptured membranes are confirmed, obstetrician will be notified immediately of:
   a. Colour, amount, odour of amniotic fluid;
   b. Arrival and status of patient;
   c. Quality + rate of fetal heart tones;
   d. Presence or absence of uterine contractions.

3. At delivery if mother is febrile to notify pediatrician.
c.12 External Monitor

Purpose:

The external fetal monitor provides a means to evaluate the presence or absence of labor and the rate and pattern of the fetal heart rate in relation to uterine contraction.

1. Procedure:
   a. The equipment necessary to begin this procedure is as follows:
      i. Basic fetal monitor unit;
      ii. Ultrasound (detects fetal heart rate) baseline, long term variability, accelerations and decelerations;
      iii. Tocodynamometer (measures uterine activity; is able to detect and register that contractions are present and how often they occur; it does not measure intensity of the contractions);
      iv. Gel to facilitate the ultrasound in detection and transmission of the FHR signal;
      v. Straps and connectors to secure the tocodynamometer and ultrasound.
   b. Before beginning external monitoring, it is important that the patient be as comfortable as possible and with the bladder empty. Generally, the optimal position for FHR signal is with the patient on her back with her head raised 30-45°. A brief but informative explanation of the procedure should be offered.
   c. Perform Leopold’s maneuvers to locate probable area of fetal heart.
   d. Place the elastic straps under patient’s back.
   e. Place transmission gel on the face of the ultrasound and turn the monitor unit on.
   f. Put ultrasound on the patient’s abdomen in area of anticipated fetal heart. If difficulty arises in locating a good signal, adjust position until optimal signal is obtained.
   g. Fasten the ultrasound to the elastic strap and connector and press the “Record” button. The FHR signal should manifest itself in a steady, non-interrupted tracing on the monitor paper.
   h. Position to codynamometer once satisfied with the tracing.
      i. The best position is usually at the uterine fundus.
   j. Connect to codynamometer in the same manner as the ultrasound.
   k. Make readjustments in the to codynamometer and/or ultrasound in order to obtain a satisfactory tracing.
l. Set to codynamometer baseline at approximately 20 mm.

m. The nurse should be alert to patient concerns about the monitor and give support and reassurance regarding its use.

n. Documentation
   i. Write all pertinent patient information on the tracing, including the patient’s name, room number, date, para/gravida, diagnosis and sequential number of the strip.
   ii. The tracing should note when the patient is on a bedpan, turns to side, receives medications, presence of the physician, vaginal exams or other pertinent information;
   iii. Monitors to be cleaned between each patient use.
c.13 Amniocentesis

Purpose:

To determine fetal genetic normalcy, maturity or well-being. Amniocentesis is done under direct ultrasound visualization, when possible, to reduce the risk of trauma to the fetus or placenta.

1. Equipment:
   a. Needles:
      i. 20-gauge, 3½ inch
      ii. 25-gauge, 5/8 inch
      iii. 22-gauge, 1½ inch
   b. Syringes:
      i. 5 ml
      ii. 20 ml
   c. Lidocaine 5 ml
   d. Three pre-labeled specimen tubes, 10 ml
   e. Three gauze sponges
   f. Four towels
   g. Six-inch ruler
   h. Band-Aids

2. Procedure:
   a. Check for signed informed consent.
   b. Determine patient’s understanding of the procedure and explain what will be happening.
   c. Ensure that the bladder is empty
   d. Assist patient with comfortable positioning.
   e. Wash designated puncture site with Betadine solution.
   f. Drape site with sterile drapes (towels) using sterile technique.
   g. Obstetrician will infiltrate area with local anesthetic.
   h. Locate pocket of fluid for aspiration using ultrasound.
   i. Obstetrician will insert needle into uterus through the abdominal wall and aspirate amniotic fluid.
   j. Cover the puncture site with a Band-Aid
   k. Monitor for cramping or contractions and assess fetal heart tones.
   l. Observe for potential risks of:
      i. Trauma to fetus;
      ii. Trauma to cord;
iii. Trauma to placenta;
iv. Trauma to maternal organs;
v. Intrauterine infection;
vi. Abortion;
vii. Premature labor.

m. Procedure and disposition of fluid will be documented on the Labor and Delivery record.
Purpose:

To provide timely nursing interventions aimed at restoring health to mother and achieving delivery of a healthy baby:

Procedure:

1. Equipment:
   a. Resuscitative equipment:
      i. Airways sizes 3, 4
      ii. Ambu Bag with size 4 mask
      iii. Curve ETT sizes 7 to 9
      iv. Introducer
      v. Laryngoscope with Assorted blades
      vi. Cotton tape
      vii. ECG monitor
      viii. Oxygen supply
      ix. Assorted syringes
      x. Assorted needles
      xi. Ringer Lactate
      xii. Epinephrine 10 mg
      xiii. Adrenaline 1 in 1000
      xiv. Water for injection
      xv. Sphygmomanometer
      xvi. Nursing notes

2. Management Guidelines:
   a. Ensure procedure guidelines for epidural analgesia are adhered to by the anesthetist performing the procedure (Ref: Analgesia in Labor – Epidural);
   b. Be alert and recognise signs of total spinal anesthesia immediately. These signs are:
      i. Pallor or cyanosis
      ii. Respiratory failure
      iii. Rapid fall in blood pressure – may be unrecordable.
iv. Paralysis

c. Summon help by activating Code Blue (Ref: Code Blue);
d. Tilt patient slightly to lateral position to relieve aorto-caval compression by the gravid uterus;
e. Insert airway and ventilate patient using ambu bag and mask with 100% oxygen at a rate of 12 times per minute;
f. Assist anesthetist in intubation and ventilation;
g. Stop oxytocin drip if in progress, and commence on IV Hartman’s solution to run rapidly to counter shock;
h. Assist in drug administration, e.g. IV Ephedrine in 10 mls dilution to raise blood pressure;
i. Monitor blood pressure, pulse and fetal heart rate every minute;
j. Initiate external cardiac massage if necessary (Ref: Code Blue);
k. Inform attending Obstetrician;
l. Prepare for emergency LSCS immediately (Ref: Emergency LSCS);
m. Get Obstetrician to speak to husband regarding patient’s condition.
n. Document all events and record all drugs used.
## c.15 Postpartum Hemorrhage

1. Call for help immediately by emergency call light and have care provider notified;
2. Check uterine tone, massage fundus gently if not firm and assess effect on bleeding or passage of clots;
3. Increase IV infusion, if present, or start IV infusion (oxytoxin) with a 16 or 18-gauge angiocath;
4. Start oxygen at 8 to 12 liters/minute by mask;
5. Elevate patient’s legs and lower head of bed;
6. Insert Foley catheter and attach drainage bag.
c.16 Birth Out of Asepsis (BOA Delivery)

1. Equipment
   
   a. Sterile BOA kit or delivery set consisting of:
      1. Straight Spencer well Artery Forceps 8”.
      2. 1 cord scissors
      3. 1 cord clamp
      4. Sterile towels x 2
      5. Sterile baby blanket
      6. Disposable mucus extractor
   
   b. Sterile gloves

2. Procedure:
   
   a. Inform emergency or house physician to come to Labor and Delivery room to attend delivery;
   b. Instruct patient to breathe and to avoid pushing;
   c. Open BOA pack;
   d. Wash perineum with Betadine, if time permits;
   e. If infant is delivering, protect perineum, instructing patient to push and stop pushing as appropriate;
   f. Check for umbilical cord around neck; if present, gently slip over head;
   g. Clamp and cut cord immediately, if it cannot be slipped over head;
   h. Turn infant’s head to the side and suction oral and nasal cavities with disposable mucus extractor.
   i. Apply gentle downward traction to deliver the anterior shoulder;
   j. After anterior shoulder is completely delivered, apply gentle traction by an upward movement to deliver posterior shoulder;
   k. Allow body to deliver spontaneously;
   l. Clamp cord with 2 Kelley’s/Pean’s close to infant’s body, leaving approximately 4 inches of cord and cut with scissors between the clamps;
   m. Use towels to dry infant and prevent heat loss;
   n. Wrap baby in blanket and place on mother’s abdomen or place under warmer if available;
   o. If physician has not arrived:
      1. Obtain cord blood;
      2. Allow placenta to deliver spontaneously. Do not pull on cord;
      3. Give I/M syntometrine;
      4. Complete Delivery Room form;
      5. Complete notification form and forward to supervisor.

---

c.17 Circulating Nurse-Vaginal Delivery
Purpose
All vaginal deliveries will have a circulating nurse experienced in labor and delivery to provide a sterile and safe environment for a vaginal delivery and immediate care of the newborn.

1. Procedure
   a. Equipment:
      i. For Delivery:
         - Delivery pack;
         - Prep tray for oxytocin injection; Methergin/ InjAmpilox/ Taxim (Prophylactic antibiotic)
         - Betadine/ Savlon
         - Disposable cord clamp;
         - Maternal/infant identification bands;
         - Sterile surgeon’s gloves (specific to each obstetrician);
         - Suture material (specific to each obstetrician);
         - Covered trash bin;
         - Two stools, one for the obstetrician and one for the father and/or significant other;
         - Suction machine with suction catheter connected ready for use;
      ii. For Care of Newborn:
         - Pre warmed radiant heater;
         - Cord clamp
         - Ambu bag with face mask
         - Pre warmed Drape/baby blanket and towels;
         - Oxygen and suction equipment ready for use;
         - Intubation equipment readily available; (laryngoscope, ETT, catheters, emergency drugs
         - Gloves for handling infant after obstetrician puts infant under warmer.
      iii. Preparation of Equipment:
         - Open sterile packs;
         - Add any additional equipment as necessary;
         - Cover trolley and basins until ready for use;
         - To get ready the suction machine with the right size suction catheter
iv. Assisting With Delivery:

- Monitor mother during delivery;
- Position patient’s legs in padded stirrups/footrests. If using stirrups, be sure knee support is no higher than length of patient’s thigh;
- Place instrument table, basin set and stool for physician’s convenient access;
- Have oxytocin ready for administration;
- Position father at head of delivery table, seated on stool;
- After delivery, put examined placenta into yellow bag, label with mother’s name and discard it.
- ID bands are placed both on mother and infant after showing infant and bands to mother.

v. Handling of Patient and Equipment after Delivery:

- Put on gloves;
- Cleanse vaginal and episiotomy area, then place sterile peripad on patient;
- Remove patient’s legs simultaneously from stirrups, if stirrups are used;
- Cover patient for warmth and privacy;
- Return to delivery room and place instruments into basin to soak, counting the instruments.
- Place linen and waste into appropriate hampers.

c.18 Skin Prep- Vaginal Delivery
Purpose
Patients undergoing vaginal delivery may receive vaginal skin prep depending on the obstetrician’s preference.

1. Procedure
   a. Determine patient’s allergies prior to prep.
   b. Instruct patient regarding procedure.
   c. Place patient’s legs in lithotomy position.
   d. Put on sterile gloves from prep set.
   e. Pour the appropriate skin prep solution into designated receptacles.
   f. Using sterile cotton wool balls to start at top of labia and wash away from vagina in back and forth motion to umbilicus; discard sponge.
   g. Then start at top of labia and wash outward away from vagina in an up and down motion to mid-thigh on the right leg; discard sponge and the same to the left side.
   h. And finally, wipe down right side of labia, over perineum and then over anus; discard sponge.

c.19 Positions During Labor
1. Equipment:
   a. IV giving set;
   b. 500 ml of IV solution (as per obstetrician’s preference) & Oxytocin inj.
   c. Canula – size as per obstetrician’s preference;
   d. Alcohol swab;
   e. A pair of gloves;
   f. Torniquet;
   g. Tapes.

2. Procedure:
   a. Complete assessment to obtain baseline values for mother and fetus.
   b. Assure the mother’s understanding of the procedure.
   c. Be prepared to monitor patient for uterine hyperstimulation, blood pressure changes, water retention and allergic reactions.
   d. Assemble equipment at bedside.
   e. Assemble infusion device with oxytocin solution.
   f. Determine fetal heart rate baseline, variability, reactivity, fetal movement and uterine contractions.
   g. Administer oxytocin (Pitocin) infusion via controlled infusion device at rate of 15 mls/hr and increase rate by 15 ml/hr every 30 minutes until clinically acceptable contractions (2-3 minutes frequency, 40-60 second duration, fundus firm at peak of contraction obtained).
   h. Take patient’s pulse and FHR every time dosage is increased.
   i. Once a regular contraction pattern is established, hold the oxytocin (Pitocin) infusion at that rate or decrease the infusion and determine if regular contraction pattern will be maintained.
   j. If at any time a question arises to be the possibility of over stimulation or abnormal FHR pattern:
      i. Turn oxytocin (Pitocin) off;
      ii. Turn patient to the left side;
      iii. Start oxygen;
      iv. Inform obstetrician;
      v. Notify if the contraction pattern slows or labor is not well established;
      vi. Check oxytocin (Pitocin) for the amount infused every 30 minutes;
vii. Continually assess the patient’s progress, both physically and emotionally;

viii. Carry out written orders for the oxytocin (Pitocin) infusion continued beyond 90 ml/hr.

c.20 Lithotomy Position

Purpose
The lithotomy position is used during specific procedures including forceps delivery, vacuum extraction and in some cases the repair of the episiotomy or lacerations.

1. Procedure
   a. Place a rolled towel or cushion under the woman’s right hip to avoid supine hypotension syndrome effects;
   b. Pad the stirrups;
   c. Raise both legs simultaneously when placing them in the stirrups to avoid torsion or injury;
   d. Readjust the stirrups so that the legs are aligned symmetrically in relation to each other;
   e. Dorsiflex the woman’s feet if she experiences leg cramps;
   f. Minimize the length of time this position is used;
   g. Remove both of the woman’s legs together from the stirrups.

c.21 Induction of Labor

Purpose:

A Specific obstetrical or medical problem must be present for an induction to be termed medically indicated.
1. Procedure:
   a. Indications:
      i. Pregnancy induced hypertension: This condition may progressively worsen unless resolved by delivery of the fetus.
      ii. Maternal diabetes Induction and delivery of the fetus 2 to 3 weeks before the expected date of delivery may be indicated to prevent fetal demise from placental insufficiency, especially if the diabetes is not well controlled during pregnancy.
      iii. Premature rupture of membranes: Induction may be indicated to prevent uterine infection when membranes have been ruptured 24 hours or more.
      iv. Rh iso immunization: A rising Rh antibody titer in later pregnancy may indicate maternal sensitization and the need for prompt delivery to prevent erythroblastosisfetalis.
      v. Post maturity (more than 42 weeks of gestation): Placental insufficiency and fetal compromise may result from prolonged pregnancy.
      vi. Suspected fetal jeopardy: Fetal compromise as evidenced by biophysical and biochemical indicators may require prompt delivery.
      vii. Intrauterine fetal demise: If fetal death has been diagnosed but labor does not ensue, induction may be indicated to reduce maternal risk of disseminated intravascular coagulation and unwarranted emotional distress.
      viii. Chorioamnionitis.
      ix. Logistic factors: History of rapid labor and distance from hospital may place a woman at risk for precipitous delivery in an uncontrolled environment.
   b. Contra indications:
      i. Maternal:
         • Previous uterine scar or trauma (classical caesarean incision);
         • Abnormalities of the uterus, vagina or pelvis;
         • Placental abnormalities (previa or suspected abruption);
         • Active herpes virus type II in genital tract;
         • Grand multiparity;
         • Over distention of uterus (from multiple gestation, polyhydramnios);
         • Invasive cervical carcinoma.
      ii. Fetal:
         • Abnormal fetal lie (transverse, breech);
- Fetal distress shown by electronic fetal monitoring;
- Positive (abnormal) contraction stress test.

iii. Bishop Score:
- A pelvic scoring using the assigned value of factors, listed below, will assess readiness for induction;

<table>
<thead>
<tr>
<th>FACTOR</th>
<th>0</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cervical dilatation</td>
<td>0</td>
<td>1 – 2 cm</td>
<td>3 – 4 cm</td>
<td>5 cm or more</td>
</tr>
<tr>
<td>Cervical effacement</td>
<td>0% - 30%</td>
<td>40% - 50%</td>
<td>60% - 70%</td>
<td>80% or more</td>
</tr>
<tr>
<td>Fetal station</td>
<td>-3</td>
<td>-2</td>
<td>-1, 0</td>
<td>+1, +2</td>
</tr>
<tr>
<td>Cervical consistency</td>
<td>Firm</td>
<td>Medium</td>
<td>Soft</td>
<td></td>
</tr>
<tr>
<td>Cervical position</td>
<td>Posterior</td>
<td>Midposition</td>
<td>Anterior</td>
<td></td>
</tr>
</tbody>
</table>

Scores of 6 or more suggest the highest probability of successful induction.

c.22 Precipitous Birth

1. Call for assistance to obtain supplies needed for delivery and additional help to support the woman and the infant. And at the same time someone to inform the Obstetrician concerned if the patient is a booked case.

2. Instruct the woman in simple direct terms to begin a pant-blow pattern.
3. Maintain a calm reassuring demeanor, while providing the woman with brief precise directives and support.

4. Apply gloves quickly. Clean, non-sterile gloves may be used if sterile gloves are not immediately available.

5. Place the palm of the hand firmly against the perineum and emerging fetal head to support the perineum and decrease the expulsive forces that can lacerate the perineum and rectum.

6. When the head is born, quickly suction the infant’s mouth and nares.

7. Quickly check for presence of a nuchal cord (umbilical cord around neck) and if present, do the following:
   a. Attempt to gently slip the coil of cord down and over the fetal head;
   b. If gentle efforts to slip the cord over the fetal head fail, apply two clamps to the umbilical cord and cut between the clamps.

8. Efforts should be made to suction the mouth and nares immediately after delivery of the infant if it has not been done before this time.

9. Clamp the umbilical cord (as noted above) approximately 4 to 5 cm from the fetal abdomen. Leave 4 to 5 cm of umbilical cord.

10. Provide positive feedback about the woman’s efforts and information about the condition of the infant.

c.23 Catheterizing the Bladder during Labor

Purpose

When the mother is unable to void due to fetal pressure, care is taken in catheterization of the bladder to prevent infection, trauma or natural supine hypotension.

1. Procedure
a. After explaining the procedure, place the patient in a supine position with a pillow or pad under the right hip.
b. Apply sterile gloves.
c. Lubricate the catheter (usually 16 French).
d. Cleanse the vulva.
e. Prep the labia minora and meatal opening with a bacteriocidal agent.
f. Insert the catheter between contractions.
g. Do not use force if unable to advance the catheter. Have the assistant place a hand above the symphysis pubis and apply gentle upward pressure on the presenting part while the catheter is advanced.
h. If the catheter still advances with difficulty, attempt to direct it slightly downward toward the sacrum.
i. In rare circumstances the assistant may need to put on a sterile glove, place the hand in the vagina and apply direct upward pressure to the presenting part.

c.24 Rubella Vaccination

1. Check prenatal record for rubella immunity.
2. Obtain order for rubella screen, if there is no record of having had the disease or the vaccine.
3. Obtain obstetrician’s orders for rubella vaccine and rubella screen, if record is negative.
4. Obtain rubella vaccine from Pharmacy and give subcutaneously at time of discharge. (This is a live virus and should be given just prior to putting patient in the wheelchair for discharge).
5. Instruct patient on the effective methods of contraception as the patient should not become pregnant for at least three (3) months.
6. Have patient sign “Rubella Vaccination Consent” and give patient a copy of the consent.
7. Document rubella vaccination on Medication Record and the instructions given to patient.

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c.25 Umbilical Cord Prolapse

1. Auscultate FHR immediately after rupture of membranes and with next contractions.
2. If cord prolapse is suspected, perform sterile vaginal examination.
3. If cord is palpable in the vagina, call for help and apply two fingers against presenting part with cord in between fingers. Press presenting part up into pelvis. Meanwhile, someone to inform obstetrician concerned. O. T. staff and anesthetist to be informed to standby.
4. While maintaining upward pressure on presenting part, instruct others to assist mother to a knee-chest position with hips elevated as high as possible or to tip the head of the bed downward.
5. Instruct others to administer oxygen by mask at 8 to 12 liters/min.

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c26 Ante partum Hemorrhage

**Purpose**

Patients presenting with ante partum hemorrhaging will be managed to control bleeding, stabilize the mother and ensure safe delivery of the baby.

1. **Procedure**

   a. Provide support for patient to help reduce apprehension.
b. Place patient in supine position and explain that she needs to remain in bed.
c. Remain with patient.
d. Assess patient’s condition, notify attending physician and obtain orders.
e. Obtain initial external fetal heart rate monitor reading.
f. Continue fetal monitoring
g. Take vital signs.
h. Ultra sound ordered and performed to rule out placenta previa.
i. Vaginal examination is performed by attending obstetrician unless orders are given. The vaginal exam is performed with gentle and aseptic techniques using sterile gloves.
j. Start oxygen per mask at 8 liters/minute as per obstetrician order.
k. Start lactated Ringer’s solution and run as per obstetrician’s order.
l. Monitor blood pressure, pulse and respirations every 15 minutes and as needed.
m. Proceed with physician’s orders.

**c.27 Pre-Eclampsia**

**Purpose:**

Patient with pre-eclampsia will be stabilized and symptoms controlled until delivery and during the immediate post-partum period.

1. **Procedure:**
a. Encourage side lying position as the blood pressure tends to lower in the (left) lateral position due to displacement of the gravid uterus off the vena cava.
b. Take vital signs, blood pressure every 15-30 minutes depending on severity.
c. Assess patients for signs of pre-eclampsia:
   i. Oedema;
   ii. Visual disturbances (seeing spots);
   iii. Headache;
   iv. Epigastric pains.
d. Collect urine and test for proteinuria after each voiding and to insert an indwelling catheter upon order of obstetrician.
e. Measure intake and output hourly unless otherwise ordered by the obstetrician.
f. Keep bedside rails up to reduce physical injury in the event of a seizure.
g. Provide a quiet environment with dime lights to decrease stimulation of the hyperactive patient and reduce the occurrence of seizures.
h. Administer medication as per obstetrician’s order.
i. Keep Resuscitation Trolley within easy reach in case of a seizure.

### c.28 Betamethasone

**Purpose**

With an obstetrician’s order, mothers between 27 and 33 weeks gestation with intact membranes will be given sterile betamethasone to help reduce the incidence of neonatal respiratory distress.

1. **Procedure**
   a. Obtain physician’s order on the prescription form.
b. Explain reason for administration of betamethasone to patient.
c. Give medication as ordered by physician.
d. Reposition patient. Explain to patient that she’ll receive a second dose in 12 – 24 hours (obstetrician will order frequency).
e. Allow patient to ask questions and verbalize fears.
f. Explain to patient the various side effects she may feel, (i.e. rapid heart rate, increased anxiety).
g. Notify the pediatrician concerned regarding this premature labor patient.

c.29 Hepatitis B Carriers or Acute Cases of Hepatitis B

1. Clinics will initiate screening of Hbs Ag. Labor and Delivery Room staff will check medical record at time of delivery for any Hbs Ag result obtained during clinic visits.
2. Hbs Ag test will be done by Labor and Delivery Room staff, if not already done antenatally.
3. Nursery nurse will administer appropriate immunizations to infant when a maternal Hbs Ag status is not available.
4. While test results are pending, the infant should receive Hepatitis B vaccine and Hepatitis B Immuglobulin (HBIG) within 12 hours of birth as per pediatrician’s order.

5. The infant, after the initial vaccine should continue to receive Hepatitis vaccine at 1 month and 6 months of age.

c.30 Intrauterine Growth Retardation (IUGR)

1. For Assessing and Providing Adequate Care in the Case of IUGR:
   a. Assess prenatal record for dating of pregnancy, maternal weight gain, prenatal testing done via sonography and non-stress tests;
   b. Continuous fetal monitoring and assessment is essential;
   c. Monitor IV fluids via intakes and outputs to ensure adequate intake;
   d. Lateral position to enhance uterine/placental perfusion;
e. Investigate maternal factors such as smoking, ETOH use, narcotic used and severe malnutrition.

2. Causes of hypotrophic growth retardation may be:
   a. Maternal (common):
      i. Pregnancy induced hypertension/pre-eclampsia
      ii. Severe chronic hypertension
      iii. Severe maternal diabetes mellitus
      iv. Chronic renal disease
      v. Collagen vascular disease (vasculitis)
      vi. Heart disease
      vii. Poor nutrition
      viii. Smoking
   b. Placental (uncommon):
      i. Placental infarct
      ii. Hemangioma
      iii. Partial abruption
      iv. Multiple gestation
### Summary Table

<table>
<thead>
<tr>
<th>Manifestation</th>
<th>Hypoplastic IUGR (intrinsic IUGR)</th>
<th>Hypotrophic IUGR (Nutritional IUGR)</th>
<th>Small for Gestational Age</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Size</strong></td>
<td>&lt; 10% estimated fetal weight</td>
<td>&lt; 10% estimated fetal weight</td>
<td>&lt; 10% estimated fetal weight</td>
</tr>
<tr>
<td><strong>Biometrics</strong></td>
<td>Symmetric, head, femur and abdomen small</td>
<td>Asymmetric, head and femur spared, abdomen small</td>
<td>Symmetric, all measurements small</td>
</tr>
<tr>
<td><strong>Doppler</strong></td>
<td>Increased umbilical SD ratio if fetal distress, uterine SD normal</td>
<td>Increased umbilical SD ratio if fetal distress, uterine SD may be abnormal</td>
<td>Normal umbilical and uterine Doppler</td>
</tr>
<tr>
<td><strong>NST/BPP</strong></td>
<td>May be predictive of fetal distress, but not reliable</td>
<td>Reliable prediction of fetal distress</td>
<td>Usually reassuring, may need to repeat in 1-2 hours</td>
</tr>
<tr>
<td><strong>Cause</strong></td>
<td>Early fetal exposure, infection, genetic abnormality</td>
<td>Utero-placental insufficiency, mostly maternal</td>
<td>Normal, just a constitutionally small baby</td>
</tr>
<tr>
<td><strong>Course</strong></td>
<td>Fetal distress common, NST/BPP may not predict</td>
<td>Fetal distress common, NST/BPP usually predictive</td>
<td>Fetal distress uncommon</td>
</tr>
<tr>
<td><strong>Prognosis</strong></td>
<td>Survivors bear stigmata of causative process</td>
<td>Survivors may suffer from prematurity, otherwise normal</td>
<td>Essentially normal</td>
</tr>
</tbody>
</table>
c.31 APGAR Scores

Purpose

Apgar scores will be performed on newborns to provide a systematic and consistent method for assessing the newborn’s adjustment to extra uterine life & provide a method of predicting which infants will require more intensive observation in the nursery.

1. Procedure:

<table>
<thead>
<tr>
<th>SIGN</th>
<th>SCORE 0</th>
<th>SCORE 1</th>
<th>SCORE 2</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Heart Rate</strong></td>
<td>Absent</td>
<td>Slow (Below 100)</td>
<td>Over 100</td>
</tr>
<tr>
<td><strong>Respiratory Effort</strong></td>
<td>Absent</td>
<td>Slow, Irregular Hypoventilation</td>
<td>Good</td>
</tr>
<tr>
<td><strong>Muscle Tone</strong></td>
<td>Flaccid</td>
<td>Some flexion of extremities</td>
<td>Active motion, well flexed</td>
</tr>
<tr>
<td><strong>Reflex Irritability</strong></td>
<td>No response</td>
<td>Cry, some motion</td>
<td>Vigorous cry</td>
</tr>
<tr>
<td><strong>Color</strong></td>
<td>Blue, pale</td>
<td>Body pink, hands and feet blue</td>
<td>Completely pink</td>
</tr>
</tbody>
</table>

- a. A score of 0 to 2 is assigned to each item. The total of the five individual assessments is the Apgar score;
- b. A total score of 0 to 2 represents severe distress;
- c. A total score of 3 to 6 signifies moderate difficulty;
- d. A total score of 7 to 10 indicates absence of stress or only the mildest difficulty;
- e. Evaluations are ordinarily conducted at one and five minutes after delivery of the entire body;
- f. One minute was chosen as the optimal time for the first score because experience had indicated that maximal depression occurred at that time;
- g. The five-minute score correlates more closely with neurological status at one year of age than does the score at one minute.
c.32 Infant Security

Purpose

To provide a safe and secure environment for all the in-patients and to protect infants from removal by unauthorized persons.

1. Procedure:

THE COMPONENTS OF AN INFANT SECURITY SYSTEM CONSIST OF:

a. Identification of infant and personnel who brought the baby in:
   i. On admission both parents’ names and numbers will be documented in the baby’s file. If mother is a single parent, only the mother will be allowed to take the baby home on discharge.

b. Access Control:
   i. Only the parents are allowed access to the Nursery/Neonatal if the baby is in the incubator or for the mother to Breast Feed.

c. Infant/Mother Contact:
   i. Assume the infant taken from nursery is released only to the mother while she is warded. The MRN number & Name of the mother must match that of the infant’s ID band.
   ii. Mother will be instructed to only release their baby to personnel wearing appropriate identification.
d. Intensive Care

**d.1 Admission to ICU**

1. Setting up bed space for admission. Housekeeping staff will:
   a. Mop the floor thoroughly.
   b. Clean bed from top to bottom and damp dust with 0.5% BACILLOCID solution leave for 30 min.

2. On confirmation of admission, the nurse will proceed to:
   a. Check and switch on all the monitoring equipment with appropriate modules and accessories to ensure the monitoring system is in good working condition and leave on standby mode.
   b. Check the gas, suction and vacuum supply and attach appropriate apparatus e.g. suction liner to the vacuum outlet and O2 flow meter to the gas outlet.
   c. Make up the ICU bed with a long fitted sheet over the mattress. A blanket is being folded into a pack and placed at the end of the bed. A pillow for the head end.
   d. Patient’s clinical folders, charts and admission record book placed on the table of the nurses’ station.
   e. All vacant ICU beds are set up at all times in readiness for any new admission.
   f. A ventilator is always set up on standby (ventilator set up according to intensivist’s order).

3. Routes of admission:
   a. ER.
   b. OR.
   c. OPD.
   d. Interdepartmental transfer.
   e. Other hospitals.

4. On admission:
   a. A brief history of patient will be handed over from the accompanying nurse.
   b. The patient will be transferred onto the ICU bed by House Keeping board the staff making sure that patient is in a comfortable position.
   c. The nurse will introduce herself to the patient (if conscious) and at the same time reassure patient and explain about the procedures that will follow. Assist with IV cannulation and carry out treatment as ordered.
d. Patient is assisted to undress and gown if condition permits.

e. Attached electrode leads as described below: (on bony area for proper contact after cleaning area).

f. Attach SPO2 sensor and NIBP cuff.

g. Record patient’s baseline vital signs and cardiac rhythm and document in patient’s observation chart.

h. Assess patient’s general condition i.e. if patient is in pain, pale, sweating, Short of Breath, then administer O2 as instructed.

i. Assess patient’s level of consciousness.

j. Notify doctor of patient’s arrival and report any abnormalities.

k. Assist Doctor or Duty Anesthetist in intubation and placing patient on ventilator (for patient requiring respiratory support).

l. Notify other departments of any stat diagnostic tests that have been ordered e.g. X-ray, ECG, blood tests and start medications ordered.

n. Request patient’s relative to take valuables home. Do a careful check on the valuables for all unaccompanied patients and get it recorded on case sheet.

o. Explain visiting privileges both to patient and family that visiting shall be limited to twice a day and only one visitor will be allowed for a patient.
5. Orientate patient and patient’s relative if available on the facilities available in the unit, rules and regulations of the hospital e.g. no smoking within the hospital premises,

6. Complete essential paper work according to routine policy and procedure:
   a. Transcribe physician orders.
   b. Complete medication record.
   c. Fill out necessary requisition for diagnostic tests.
   d. Fill out appropriate charge slip.
   e. Dietary order for patient via phone.
e. Dialysis

**e.1 Priming Procedure**

1. Dialysis technician or nurse shall put on the machine and do the necessary rinse.
2. Dialysis technician or nurse shall check the residual chemical after rinsing the machine.
3. Dialysis technician or nurse shall add the chemical, acid conc. and bicarbonate conc. After checking for chemical residue and proper functioning of the machine.
4. Dialysis technician or nurse shall conduct the diagnostic test to confirm the temperature and conductivity before priming.
5. Dialysis technician or nurse shall connect the dialyzer, blood tubings after checking the name of the patient due for HD.
6. Dialysis technician or nurse shall connect 2 liters of normal saline with an IV line to the machine.
7. Dialysis technician or nurse shall prime the dialyze and tubing with 100 to 150ml blood pump speed to remove the chemical and air.
8. Dialysis technician and nurse shall check the residual chemical by conducting the litmus paper test. Prime till test is negative.
9. Dialysis technician or nurse shall put for recirculation after satisfied with priming. Re-circulate for 20 min and inject 3000 units of Heparin and continue the circulation for another 10 minutes.
e.2 Starting the Dialysis

Dialysis Nurse or technician receives the patient scheduled for HD.

1. Dialysis nurse or technician will check the patients’ weight and provide a comfortable bed for him; verify if the Doctor has given any special instructions.

2. Dialysis nurse or technician to check the vital signs.

3. Dialysis nurse to take the patients consent before starting dialysis

4. Once the patient is comfortable on his bed the sterile tray for starting dialysis will be set with all the accessories required like Syringes, AVF needles, Heparin, cleaning solutions, plasters, and local anesthetic agents. The access will be checked and the area cleaned with Betadine solution/ spirit.

5. Cannulate the fistula and check for the flow.

6. Patient will be connected to the machine on which the dialyzee and tubings are kept ready for him.

7. Record the details in the patient chart.
e.3 Closing Dialysis

1. Dialysis technician or nurse shall keep the sterile tray ready at the end of the HD.
2. Dialysis technician or nurse shall keep the post HD medication ready to inject. They will also keep the blood sample container ready if any post sample is needed.
3. Dialysis technician or nurse shall give the injection or take the sample and close dialysis using aseptic techniques.
4. Dialysis technician or nurse shall secure the access (If AV Fistula shall give 10 to 15 minutes pressure at site and keep sterile gauze).
5. Dialysis technician or nurse shall check the BP (lying, sitting, standing), weight, pulse and temperature record the same in the HD chart and in the IP nursing chart.
6. Dialysis technician or nurse shall send the patient back to the ward or home when all the post HD parameters are within normal range.
7. Dialysis technician or nurse shall inform the Doctor. If the patient’s condition is not good, ensure the patient is comfortable and call the Doctor.
### e.4 Infection Control of the R.O water for Dialysis

1. Dialysis technician shall check the water by following the standards.
2. pH of the water should be 6.5 to 7.2
3. Microbiological value, culture sensitivity value should be < 200 cfu/ml
4. Dialysis technician shall collect RO water (without contamination) for culture from the inlet water line after the 5 micron filter; after letting out 1-2 liters of water.
5. Dialysis technician shall label the C/s container with the date and specification.
6. Dialysis technician shall enter the date and signature in the C/s collection register book.
7. Dialysis technician shall send the C/s sample with the collection book to the microbiology lab.
8. Dialysis technician shall collect the report and enter the same in the C/s report register.
9. Dialysis technician shall ensure the quality of the water as per standard.
10. Dialysis technician shall make arrangements to clean the tank and pipeline if the C/s value is more than 200 cfu/ml by giving a bleach wash.
11. Dialysis technician shall re-schedule the HD posting.
12. Dialysis technician shall make sure the bleach is adequately cleaned after rinsing the tank and pipelines by conducting the residual chemical check, which is repeated until a negative result is obtained.
13. Dialysis technician shall check the pH of the RO water every morning before stating the shift of Dialysis and report the same to the Dialysis in-charge.
14. Dialysis technician shall follow standard protocol to check pH.
15. Dialysis technician shall record the pH value daily in the pH register and submit the same to the dialysis in-charge everyday.
16. The dialysis in-charge technicians will recheck the pH daily to control the quality of the RO water. Dialysis in-charge will re-schedule the HD posting if the pH is more or less than the standard allowed.
17. Dialysis in-charge shall make arrangements to clean the RO system by the biomedical engineer to restore the pH of RO water and confirm before conducting dialysis.
### f. High Dependency Unit (HDU)

**JOB Description in HDU:**

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Category</th>
<th>Brief Job description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-</td>
<td>Medical Officer</td>
<td>Supportive care and baseline management on 8hr shifting duty including equipment handling and basic pathological / biochemical tests utilizing equipment present in the CCU / HDU. One of the CCU / HDU MOs will act as In Charge and will discharge additional administrative duties</td>
</tr>
<tr>
<td>2-</td>
<td>Nursing In Charge</td>
<td>Supervisory, Logistics management, Regular reporting, duty roster of nursing staffs</td>
</tr>
<tr>
<td>3-</td>
<td>Nurse</td>
<td>Patient care on 8 hr shifting duty including equipment handling and basic pathological / biochemical tests utilizing equipment present in the CCU / HDU as following,</td>
</tr>
</tbody>
</table>

- i) General Nursing Care
- ii) Basic Life Support
- iii) Assisting Advanced Life Support
- iv) Airway Suction & Nebulisation
- v) Simple blood testing like Blood Glucose by glucometer
- vi) ECG
- vii) Monitoring – a) Clinical parameters, b) Multichannel monitors, c) Ventilator parameters
- viii) Maintenance of different charts
- ix) Maintenance of records, statistics & reporting
- x) Sampling body fluids
- xi) Managing requisitions for tests,
- xii) Maintenance and keeping ready stocks of drugs, equipment, consumables etc.

---

**High Dependency unit (HDU)**
The HDU is staffed and equipped to provide a level of care intermediate between ICU and the general wards and has immediate access to medical support at all times.

Admitted patients will

i) have acute medical and surgical conditions

ii) typically have acute reversible single organ failure and be at risk of developing complications

iii) be suitable for a 1:2 nursing staff to patient ratio.

Patients may be admitted to HDU

i) directly from ICU or the wards, or

ii) from ICU as a step-down prior to transfer to either wards or referring hospitals.

Requirement for HDU is determined predominantly by acuity as opposed to being for specific conditions. Such patients will typically require a high level of observation and monitoring, frequent interventions and/or therapies not available on the wards.

Typical conditions/problems which are appropriate for HDU care are listed below, but this list is also not intended to be either exhaustive or obligatory. It may also be appropriate/necessary to care for patients with the conditions below in intensive observation areas within wards. Ultimately, appropriateness will be determined by individual clinical assessment. During times of peak demand some patients who would be HDU candidates may have to be cared for elsewhere in the hospital.

**AIRWAY**

- Apnoeas requiring intervention
- Upper airway obstruction requiring either oxygen, nebulised adrenaline and/or with a moderate or greater increase in work of breathing
- Airway compromise or at significant risk of such after a procedure (after having been recovered in ICU)
- Tracheostomy patients with either a new tracheostomy (and not requiring ventilation), or for observation immediately after decannulation. Length of stay is determined by the adequacy of the underlying airway.

**BREATHING**

- Requirement for $\geq 50\%$ oxygen or $\geq 10$ L/min oxygen
- Acute severe asthma requiring interventions more frequently than hourly
• Requiring high flow oxygen for an acute respiratory condition
• Initiation of non-invasive ventilation in children who will need long term Respiratory support

**CIRCULATION**

• Requirement for ongoing fluid resuscitation to avoid circulatory instability
• Requirement for low dose dopamine or dobutamine and/or milrinone and/or arrhythmias
• Fluid and/or electrolyte/metabolic instability requiring frequent blood testing and/or intervention e.g., acute decompensation of metabolic disorders, major electrolyte abnormalities
• Acute renal failure
• Hypertension requiring invasive monitoring and acute therapy

**NEUROLOGICAL**

• Acute neurological conditions with impaired consciousness
• Prolonged (e.g., >1 hour) or frequent seizures requiring intervention
• Neuromuscular patients requiring at least hourly assessment/intervention, either newly diagnosed or with an acute deterioration

**OTHER**

• Acute liver failure with complications
• Significant GI bleeding e.g., variceal bleeding
• Requirement for continuous monitoring and observation e.g., after major surgery, surgery in children with significant co-morbidities, drug overdose, desensitising with high risk of anaphylaxis, etc

**HDU is not appropriate for**

i) Patients with >1 organ system compromised as they should be in ICU

ii) Patient with chronic conditions (e.g., chronic respiratory failure, chronic neurological conditions) without a new and acutely reversible component of their condition
Process for Admission and Management

- The on-call consultant will be responsible for all patients admitted to HDU. Any orders the primary team have need to be discussed with the medical team. Only medical staff are able to chart patient orders and drugs. This is to ensure a single common line of communication.

- All admissions should be discussed with the on-call registrar or consultant

- Patients will be reviewed daily by the primary team.

- Any differences of opinion about patient admission or management should be discussed by the consultant and primary team consultant

- Children with severe chronic conditions in whom limitations to therapy are appropriate should have these agreed and documented on admission. It may be appropriate for a child to be admitted to HDU but not PICU.

- HDU patients will be cohorted according to acuity and infectivity and may therefore be cared for anywhere within the HDU complex

- Patients booked to come to HDU after surgery need to have bed availability confirmed by either the surgeon or anaesthetist

Discharge from HDU

This will occur when

   i) The patient is in a suitable condition for the ward

   ii) The primary team has been notified

   iii) Discharge documentation is completed.

DUTIES & RESPONSIBILITIES RELATED TO CRITICAL CARE UNIT / HDU

1. To maintain the prepared standard protocol of asepsis strictly.

2. To maintain the hand washing protocol, dress protocol as prescribed.

3. To autoclave and disinfect necessary articles, instruments, linen, gadgets, equipments, etc. and keep ready for use.

4. To check all electrical points, pipe line 02, in built suckers for proper working condition.

5. To communicate with concerned person for proper maintenance of unit.
6. To carry out the instructions of the sister-in-charge as allocated by her.
7. To prepare the drugs, crash trolley, etc. properly.
8. To check Oxygen, Carbon dioxide, Nitrous Oxide etc. for proper use.
9. To check monitor, ventilator, all life saving gadgets for proper working condition.
10. To provide special care to the patient guided by the Medical Officer e.g. endo-trachial suction.
11. To fumigate the department periodically.
12. To keep records of all the procedures of the patient neatly.
g. Pediatric Intensive Care Unit (PICU)

A pediatric intensive care unit (also paediatric), usually abbreviated to PICU / is an area within a hospital specializing in the care of critically ill infants, children, and teenagers.

The PICU is the section of the hospital that provides sick children with the highest level of medical care. It differs from other parts of the hospital, like the general medical floors, in that the PICU allows intensive nursing care and continuous monitoring of things like heart rate, breathing, and blood pressure.

Pediatric intensive care unit nurses have three main duties:

- Monitoring patients,
- Providing appropriate care and
- Informing patients and their families on the status of procedures.

Nurses are trained to perform life-saving, invasive interventions to stabilize patients and apply crisis management techniques. They are generally assigned to only 1-3 patients in order to allot them more time to handle these complicated cases. Nurses are also required to be knowledgeable on state and federal regulations regarding treatment and may function as patient advocates for those who are unable to do so.

DUTIES and responsibilities related to PICU:

- Once patients are admitted and stabilized, nurses obtain health histories and diagnose their status in order to create an individualized patient care plan, including non-pharmacologic and pharmacologic treatments.
- Nurses then implement appropriate treatments and monitor, record and evaluate responses. Additionally, nurses analyze physical, psychological and behavioral traits and assess potential risks.
- Other duties include administering medication, addressing pain management and monitoring wounds for infection.
- Nurses may provide special assistance to families, including guidance on preventative care and the potential risks of treatments. While informing families on patients’ statuses, nurses may also promote positive health behaviours, perform consultations, provide referrals and facilitate patient transition from the PICU to other health care facilities.
- Additionally, nurses may counsel families on further treatment, end of life care and organ donation.
h. Burn Care Unit

A burn care nurse specializes in the care of patients who suffer from burn injuries, and in many cases, have also experienced other kinds of trauma. The burn care nurse treats and monitors burn wounds, and plays a critical role in the assessment of emotional and psychological trauma that so often accompanies a burn injury. This specialty calls for a wide range of clinical skills including triage, pain management, critical care and trauma recovery.

Burn Care unit nurses are responsible for:

- observing, monitoring, and often ventilating burn victims to protect their physical well-being
- Stabilization of acutely burned patients
- Assess, dress and monitor burn wound
- Maintain patient's comfort, assess pain levels and assist in pain management
- Administer medications intravenously, by injection, orally or by other methods
- Monitor the patient's emotional well-being and determine whether mental health interventions are needed
- Educate the patient's family and other caretakers in ongoing burn wound care, rehabilitation procedures and provide emotional support
- May also help educate the community-at-large about burn prevention techniques and best practices.
- Helping patients recover from severe second and third degree burns, or providing end-of-life treatment if needed.
- Most burn unit nurses work one-on-one with injured patients from initial admission through recovery.
- Assessment of the burn’s damage, taking vital signs, and starting IV fluids.
3-Policies

1. Transfer or Referal of Patients Who Do not match the Organization resources

Purpose:
To establish an appropriate mechanism for transfer or referral of patients who do not match the organizational resources.

Scope:
Patients who do not match organizational resources, both in emergency as well as non emergency situations.

Responsibility:
Treating Physician & Emergency Doctor

Policy:
While majority of patients accessing care directly or through referrals, match the scope of available facilities, there may be instances where patients who seek treatment do not match the available resources. Such cases will need to be referred or transferred to another facility both for emergency as well as non emergency conditions.

Emergency Medical Conditions:
The Emergency Department will ensure:

- Prompt initial assessment and management of all emergency conditions by qualified staff within their capabilities and resources available
- Provide stabilization and prompt and safe transfer to another facility if a decision to transfer has been established.
- The decision for transfer will be taken by the treating Physician, with the consent of patient/relatives depending on the medical condition of the patient.
- In selecting the appropriate centre for transfer, the patient’s preference, vicinity, and availability of care and available bed is taken into consideration.
- A transfer of a critical patient between facilities, in which the benefit does not outweigh the risk, is not an appropriate transfer. The decision to transfer should be taken by the transferring Physician and made on proper assessment of the condition of the patient and deciding that the benefits of transfer outweigh the risks. Generally speaking, if the patient is likely to deteriorate or his condition is unstable, it is better to withhold transfer, as it is better to avoid death en route unless conditions are forcing the decision. In such cases, the consent, risks of transfer etc should be fully explained and documented.
- The hospital provides the receiving hospital with all appropriate medical records, or copies thereof, related to the emergency medical condition, including without limitation available
history, observations of signs or symptoms, preliminary diagnosis, results of diagnostic studies or telephone reports of the studies, treatment provided, and results of any tests. Other appropriate medical records not available at the time of transfer must be sent as soon as possible thereafter. Additionally, documentation must include the patient's written informed consent to the transfer or the written certification that the benefits of transfer outweigh the risks.

- The transfer is affected through qualified personnel and transportation equipment, as required, including the use of necessary and medically appropriate life support measures during the transfer.
- A proper handover of the patient takes place when handing over is carried out at the receiving facility.

**To Stabilize:**

With respect to an Emergency Medical Condition that the individual is provided, such medical treatment as is necessary to assure that no material deterioration of the condition is likely to result from, or occur during, the transfer of the individual from the facility as determined by a physician. Such treatment may include the following, whenever indicated:

a. Establishing and assuring an adequate airway and adequate ventilation
b. Initiating control of hemorrhage.
c. Stabilizing and splinting the spine or fractures.
d. Establishing and maintaining adequate access routes for fluid administration.
e. Initiating adequate fluid and/or blood replacement.
f. Determining that the patient's vital signs (including blood pressure, pulse, respiration, and urinary output, if indicated) are sufficient to sustain adequate perfusion.

**Transfer of Unstable Patients**

1. If a patient has not been or cannot be stabilized, the hospital may not transfer the patient unless either (a) or (b) is met:

   a. The patient, or legally responsible person acting on the patient's behalf, requests in writing that the transfer be effected, after being provided complete information pertaining to the transfer decision, including information concerning:
      i. The medical necessity of the transfer.
      ii. The availability of appropriate medical services at both the hospital and the receiving hospital.
      iii. The hospital obligation to provide screening and stabilization services without any regards.

   b. A physician has determined and signed a certification to the effect that, based upon the reasonable risk and expected benefits to the patient and based upon the information available at the time of transfer, the medical benefits reasonably expected from the provision of appropriate medical treatment at another hospital outweighs the increased risks to the individual.
2. The patients who are unstable and/or are on ventilator support will be transferred in an ACLS ambulance and have to be accompanied by at least the following staff.
   a. A qualified Physician with BCLS/ACLS training.
   b. A qualified nurse

**Transfer of Stable Patients**

If a patient has been stabilized, such that

a. No material deterioration of the patient's condition is likely within reasonable medical probability, to result from or occur during the transfer of the individual,

b. Or if a patient has been determined not to have an emergency medical condition,

c. The hospital may transfer the patient, if written informed consent is obtained from the patient/attendant, after the patient has been provided complete information pertaining to the transfer decision, including the risks and benefits of the transfer.

**Documentation:**

1. Physician documentation
2. Progress note stating medical necessity, if the procedure is emergent or urgent, and if the patient is stable for transport.
4. Nursing documentation
5. Time patient left the unit
7. Patient and/or family in agreement with plan.
8. If sedation, anesthesia, or other medications will be required, a physician to physician or nurse to nurse phone report may be necessary to maintain continuity of care.
9. Non Emergency Medical Conditions
10. In such cases, the Consulting Physician, discusses the further treatment requirements with the patient and documents a referral to another centre

**Procedure**

<table>
<thead>
<tr>
<th>S. No</th>
<th>Steps</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Patient shall be transferred to other Hospital, if the treatment needs of patient doesn’t match the scope of services provided by hospital</td>
<td>Consultant</td>
</tr>
<tr>
<td>2.</td>
<td>Decision for transfer to other facility shall be taken by consultant and same shall be noted on OPD/IPD / Emergency documents related to patient.</td>
<td>Consultant</td>
</tr>
<tr>
<td>3.</td>
<td>In case of emergency, the concerned consultant is informed by the RMO on duty</td>
<td>RMO</td>
</tr>
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</tr>
<tr>
<td></td>
<td>Consultant’s advice is taken before transferring the patient, in odd hours, decision is taken by the duty doctor</td>
<td>RMO</td>
</tr>
<tr>
<td>6</td>
<td>In case of unknown patients police is informed.</td>
<td>RMO</td>
</tr>
<tr>
<td>7</td>
<td>Treatment given and diagnosis is written on the case paper</td>
<td>RMO</td>
</tr>
<tr>
<td>8</td>
<td>Arrange the ambulance for the patient.</td>
<td>Staff nurse on duty/telephone operator</td>
</tr>
<tr>
<td>9</td>
<td>Referral slip with copy of patient documents is given to the patient / relative</td>
<td>Staff nurse on duty</td>
</tr>
<tr>
<td>10</td>
<td>Receiving facility is informed about patient arriving and to keep the bed ready.</td>
<td>Staff nurse on duty</td>
</tr>
<tr>
<td>11</td>
<td>In case of unstable patient a call is made in the concerned department at Hospital, where the patient is being shifted and patient condition is explained to the concerned health professionals.</td>
<td>Doctor on duty</td>
</tr>
<tr>
<td>12</td>
<td>If the patient is stable, he / she is transferred in a general ambulance with driver and emergency assistance.</td>
<td>Staff Nurse</td>
</tr>
<tr>
<td>13</td>
<td>If the patient’s condition is unstable, he should be stabilized in emergency before transferring</td>
<td>Casualty Doctor on duty</td>
</tr>
<tr>
<td>14</td>
<td>If the patient is critical (as decided by doctor), an ambulance with critical care facility should be transporting the patient accompanied by one resident doctor and nurse.</td>
<td>Staff Nurse/RMO</td>
</tr>
<tr>
<td>15</td>
<td>Driver shall arrange ambulance and drive to ambulance and drive to transfer the patient</td>
<td>Driver</td>
</tr>
<tr>
<td>16</td>
<td>In case of conflict RMO shall be contacted</td>
<td>Staff Nurse</td>
</tr>
</tbody>
</table>
2. **Critical and Non Critical Patient Test Results**

A. **Purpose:**
To provide a protocol for notification of critical and non critical patient test results. Each department is responsible for ongoing assessments and to identify and implement a process, as needed, for the reporting of critical values.

B. **Definitions:**

**Normal:** A test result that is within the normal variation and does not require follow-up.

**Non-Critical:** A test result that is beyond the normal variation and that:
- a. Is not what is expected due to the patient’s current medication and/or disease state
- b. May require follow-up to ensure stability, resolution, or further evaluation and/or
- c. May change the medical management of that patient.

**Critical:** Tests result beyond the normal variation with a high probability of a significant increase in morbidity and/or mortality in the foreseeable future and requires rapid communication of results for determination of intervention.

**Read Back:** The individual accepting the critical test result must record and then read back the critical test result, in its entirety, to the reporter at the time the result is given.

C. **Communication Tools:**

**Electronic:** Hospital Management Information System
**Manual:** Hand delivery or pick up to/by the testing area, patient care area or physician / nurse / ward staff.
**Verbal:** including verbal report in person or by telephone / intercom.

D. **Order of Notification:**
- a. Ordering / Treating Physician / Staff nurse on duty / Doctor on duty
- b. Each department reporting critical values must have in place a defined process, which documents the reporting of pre-approved critical values.

E. **Normal / Non Critical Test Results Reporting and Documentation**

**Laboratory**
Results are reported in Reporting register and also entered in patient’s records

**Radiology**
Results are reported in Reporting register and also entered in patient’s records. Both the image(s) and report are archived, when applicable.
F. Critical Test Results Reporting and Documentation

Laboratory

1. When a critical result is identified, the Laboratory Technologist contacts the ordering physician or their assistant within 15 minutes of test readiness via a phone / intercom.
2. The result can be accessed in the HIS/ via email.
3. For the patient who is no longer in the hospital the Laboratory Technologist contacts the ordering physician or their assistant immediately after identification of critical result.
4. If the ordering physician or their assistant is not reached within 15 minutes of test readiness, the available doctor shall be contacted.

Radiology

1. When the radiologist identifies a critical test result, a verbal report is given to the ordering physician in person or by phone.
2. If the ordering physician is not available, the radiologist immediately contacts their assistant and a verbal report is given in person / phone / intercom.
3. If their assistant could not be reached, the radiologist will immediately follow the order of notification.
4. The result is reported in the HMIS/ or via email.
5. The image(s) and the report are archived, when applicable.

USG

1. When a significant abnormality is identified, the USG logist contacts the ordering physician / assistant within 15 minutes via phone / intercom.
2. If the ordering physician or their assistant does not respond within 15 minutes, the Sonographer will follow the order of notification.
3. The ECHO report form is completed and saved in the departmental filing system with a copy being sent to the patient record. Included in the report is the person receiving the report and the date/time it was received. The images are saved in the departmental equipment.

G. System Failures

Clinical Laboratory

With any applicable communication system failure a hard copy of the critical result will be delivered to the ordering physician or their assistant. The Laboratory Technologist will document the name and credentials of the person receiving the report with the time of delivery in Receipt register.

Radiology

With any applicable communication system failure, the radiologist will give an in person verbal report to the ordering physician or their assistant.
3. **Policy and procedure guiding transfer referral of stable unstable patient to**

**Other Organization**

1.0 **Objective**

To transfer/refer stable and/or unstable patients to other organization.

2.0 **Scope**

Hospital Wide Policy & Procedure documents.

3.0 **Responsibility / Authority**

Chief Medical Superintendent
Hospital Manager

4.0 **Details**

Patient who does not watch the scope of hospital are referred/transferred appropriate to another set up

5.0 **Definition**

An “appropriate transfer” is defined as one in which the receiving facility has available resources and agrees to accept the transfer and provide necessary treatment.

5.1 The transferring facility provides the receiving hospital with a complete copy of the patient’s treatment summary with inter-facility transfer form and other information (such as discharge summary, copies of X-rays, etc.).

5.2 The transfer is under qualified personnel and transportation equipment, including use of necessary and medically appropriate life support measures during the transfer.

5.3 Inter facility transfer form is mandatory to fill when patient go to other facility the following record must be documented:

- Name of the organization
- Reason for transfer (should be available at all) Nursing counters
- Treatment given in Hospital
- Special reason for transfer
- Patient condition or status during transfer

5.4 Indications for transfer to another facility:

(i) The service is not provided within the hospital.
6.0 Procedure guiding the transfer/ referral of stable patients to other organization.

6.1 The patient on admission is assessed. If after initial assessment, it is found that the patient is suffering from an ailment, which requires intervention from a specialist other than ailments, not provided by the hospital, the patient may be referred/ transferred to the organization/ hospital having that specialty.

6.2 The Senior Consultant / Consultant shall contact the faculty of the receiving hospital to ensure that eligibility guidelines are met. Transportation arrangements shall be made through the Admin Manager.

6.3 The stable patients are referred along with attendants. MICU (Mobile Intensive Care Unit) services along with a doctor or a nurse are offered on demand.

6.4 If the patient is admitted for some time, then transferred/ referred, a discharge summary is given explaining the patient’s condition and mentioning the significant findings and the treatment given.

6.5 The transfer notes & Inter-facility form in patient file should include-Date, reason for discharge and name of the receiving hospital/facility.

7.0 Procedure guiding the transfer/ referral of unstable patients to other organization.

7.1 The patient when received by the hospital is assessed and stabilized. If patient is suffering from an ailment, which requires intervention from a specialist other than availability in hospital, the patient will be referred/ transferred to the organization/ hospital having that specialty.

7.2 The Senior Consultant / Consultant shall contact the faculty of the receiving hospital to ensure that eligibility guidelines are met. Transportation arrangements shall be made through the Hospital Manager.

7.3 Critically ill patients on life support systems are transferred in MICU (Mobile Intensive Care Unit) along with a nurse and doctors after explaining the risk of transportation and obtaining consent from the patients relatives.
7.4 If the patient is admitted for some time, then transferred/referred, a treatment summary, inter-facility transfer form is given explaining the patient’s condition and mentioning the significant findings and the treatment given.

7.5 The transfer notes in patient file include-Date, reason for discharge and name of the receiving hospital.

7.6 In case the consultant in-charge of the patient decides that the clinical condition of the patient does not need transfer and patient should be further stabilized, the patient is not transferred. A situation may arise where the relatives are not willing for transfer and do not give consent. Before transfer, it is being ensured that proper facilities as warranted by the clinical condition of the patient must be available in the referred hospital and also confirm the availability of bed.

8.0 List of hospitals
King George Medical College
Address: Shah Mina Road, Lucknow, Uttar Pradesh 226003
Phone: 0522 225 7540

Sanjay Gandhi Post Graduate Institute of Medical sciences
Address: Rae Bareli Road, Lucknow, Uttar Pradesh 226014
Phone: 0522 266 8700
4. **Discharge Policy**

**Purpose:**
To guide the healthcare team in evaluation, individualization and follow-up of a patient’s discharge-related needs during, and after admission.

**Scope:**
All patients who are admitted at the hospital.

**Responsibility**
Front Office, Nursing Dept, Consultants, Resident Doctors, Billing accountant

**Policy**
Patients will have regular assessment and follow-up for discharge needs.

**General Information:**

a. Discharge planning is to be initiated on the basis of the patients’ condition by the Consultant and at least 12 hours before actual discharge.

b. Assessment of the patient is to be made for being ‘medically stable’ and fit for discharge. This may include assessment of functional, medical, medication, and nutritional needs.

c. Discharge planning is a multidisciplinary, collaborative process involving the patient, patient’s family, and concerned team members during a specific episode of illness.

d. Discharge planning involves several activities:
   i. Development of a care plan for post discharge care.
   ii. Arranging for the provision of services, including patient/family education and referrals.
   iii. The Nurse in charge as well as the Resident Doctor is responsible for coordinating the discharge with other team members.
   iv. Routinely anticipated patient and family discharge needs are to be documented in the Patient Discharge Summary.

v. **The discharge summary will contain:**
   - Reason for admission.
   - Significant findings.
   - Diagnosis
   - Condition at discharge
   - Investigation results.
   - Details of any procedure performed.
   - Medication.
   - Other treatment given.
• Follow up
• Advice
• Medication.

10 Instructions regarding how to obtain urgent care.
• Discharge summary will be provided to every patient at the time of discharge and are included in the case summary.
• In case of a death the death summary should also contain the cause of death.
• For MLC cases refer to procedure document below.

Each Patient will be provided with a discharge summary on the day of discharge. A copy of the discharge summary will be kept in the medical record.
5. Left Against Medical Advice (L.A.M.A)

Purpose
To define the policies for patients leaving the hospital against medical advice

Scope
Patients admitted in the hospital.

Responsibility

Policy
1. Under the scope of patient rights, no patients can be kept in hospital against their will.
2. The nursing staff and the doctor concerned should try to persuade the patient to stay and at the same time try to find out why the patient wishes to leave, if possible the problem should be resolved.
3. It is the responsibility of the doctor to explain to the patient that if the patient leaves the hospital against medical advice the hospital ceases to be responsible for his/her care.
4. Despite this if the patient still wishes to take his/her own discharge all possible steps should be taken to ensure the patient/authorized attendant signs a form to this effect before leaving the hospital.
5. In the event that the patient refuses to sign the form, this should be documented clearly in the Medical Records.
6. All discussions and risks explained should be recorded in the patients’ Medical Records.
   a. Discharge summary will be prepared and handed over to the patient.
DISCHARGE/LAMA/MLC PROCEDURE

Purpose:
To streamline the process of discharging patients from hospital

Scope: All patient discharges of inpatient, observation patients, daycare patients, patients undergoing transfer to another external facility, LAMA and absconded patients. Patient’s death in hospital will also be reflected in the discharges.

<table>
<thead>
<tr>
<th>S. No</th>
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<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>The treating physician will decide on patients’ readiness for discharge / transfer for advance treatment. Patients who request leaving against medical advice are also considered. If the patient leaves without intimation or informing the ward staff, it shall be recorded on patient’s medical record as patient absconded and considered to be discharged. Patient death in hospital is to be reflected in discharge procedure.</td>
<td>Treating physician</td>
</tr>
<tr>
<td>2</td>
<td>If the patient is not fully recovered, patient shall be advice to stay in the hospital till recovered. If still unwilling to remain, request to be obtain in writing from patient/ family member / attendant / guardian.</td>
<td>Specialist / Consultant</td>
</tr>
<tr>
<td>3</td>
<td>Absconded patients are to be intimated to RMO and a report to be made to the local police in case need be/or in case of MLC.</td>
<td>Treating physician / RMO</td>
</tr>
<tr>
<td>4</td>
<td>After the decision to discharge a patient is made, a discharge summary is prepared</td>
<td>Treating physician / Assistant/ HOD</td>
</tr>
<tr>
<td>5</td>
<td>Discharge shall be recorded in a register, which shall include patient’s identity, discharge diagnosis, date and time of discharge, ward , special remarks if any.</td>
<td>Staff nurse</td>
</tr>
<tr>
<td>6</td>
<td>Billing dues if any are to be intimated to the patients / family member and cleared in writing prior to handing over of discharge card</td>
<td>Nurse / Front office executive</td>
</tr>
<tr>
<td>7</td>
<td>Discharge advice, medication, follow up and other necessary instructions shall be given to the patient at the time of handing over the discharge card</td>
<td>Staff nurse</td>
</tr>
<tr>
<td>8</td>
<td>Patient feedback / satisfaction survey proforma to be completed and collected</td>
<td>Staff nurse / Patient/ Family member</td>
</tr>
<tr>
<td>9</td>
<td>Special transportation arrangements if necessary shall be made</td>
<td>Staff nurse / Family member</td>
</tr>
<tr>
<td>10</td>
<td>Endorse Death / LAMA / Absconded / Medico-legal case on patients medical record where necessary</td>
<td>Staff nurse</td>
</tr>
<tr>
<td>11</td>
<td>Patients Indoor case paper is to be sent to Medical Records Department as scheduled and record maintained</td>
<td>Staff nurse / MRD in charge</td>
</tr>
</tbody>
</table>

Discharge summary shall be made for all discharged / LAMA patients. In case of patient’s death, death summary shall be prepared.
The instructions in discharge summary shall be in a manner that the patient / family member can easily understand.

Use of medical terms and jargons shall be avoided to the extent possible

Discharge summary shall comprise the following components.

1. Reason for admission, significant findings, diagnosis, condition at the time of Discharge

2. Information regarding investigation results, any procedure performed, medication and other treatment given

3. Follow up advice, medications, any other instructions in an understandable Manner

4. Instructions about when and how to obtain urgent care are to be Incorporated

5. In death cases the summary is to include cause of death
6. **Emergency Care**

**Purpose**

To streamline the system of attending the patients in emergency

**Primary Responsibility**

Doctor on duty in casualty

<table>
<thead>
<tr>
<th>S No</th>
<th>Procedural Steps</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Receive Patient on stretcher</td>
<td>Ward Boy /Servant</td>
</tr>
<tr>
<td>2</td>
<td>Call the doctor</td>
<td>Nurses</td>
</tr>
<tr>
<td>3</td>
<td>Immediately check</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>L. I. S. A : Life Threatening</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Impression</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stabilize Cervical Spine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>AVPU</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Air Way : Suction</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Head Tilt Chin Lift /</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Jaw Thrust Maneuver</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Oral Airway</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Assess for Advance Air Way Management</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Definitive Air Way</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Breathing : IPASS-O2</td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>I : Inspection</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>P: Palpate</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>A: Auscultation</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td><strong>O: Oxygen</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(1) Do you see any sign of inadequate respiration?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(2) Is the rate and quality of breathing adequate to sustain life?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(3) Is the patient complaining of difficulty breathing?</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(4) Quickly palpate the chest for unstable segments, repetition (trauma), and equal expansion of the chest</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(5) If the patient is responsive and breathing &lt; 8 or &gt;24, administer oxygen using a None Rebreather Mask (NRM) at 15 lts/minute</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(6) If the patient is unresponsive and breathing is adequate, administer oxygen using a NRB at 15 lts/minute</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(7) If the patient is unresponsive and breathing is inadequate, administer oxygen using a Bag</td>
<td></td>
</tr>
</tbody>
</table>
6. **Circulation: VCRS**
   - Check: Natural Voids
   - Carotid Artery
   - Radial artery
   - Skin: Color Temperature, Condition
   - Manage For Shock
   - Take Two Large bore IV Lines when needed
   - **Doctor /Staff Nurse**

8. **Admit the patient**
   - Decision Making:
     - If expert opinion is delayed for more than 20 Minutes for any reason then critical decision is taken by Doctor to transport patient immediately by Rapid Transport to Advance Centre.
     - Call Ambulance
   - **Doctor**

9. **CHECK FOR CUPS:**
   - Critical
   - Unstable
   - Potentially Unstable
   - Stable
   - **Doctor /Staff Nurse**

10. **Exam:**
    - Rapid Physical Examination
    - DCAP BTLS:
      - D: Deformities
      - C: Contusions
      - A: Abrasions
      - P: Penetration / Puncture
      - B: Burns
      - T: Tenderness
      - L: Lacerations
      - S: Swelling
      - Head → Neck → Chest → Abdomen → Groin → Extremities
    - **Doctor /Staff Nurse**

11. **Take Full Set of Vital Signs**
    - Blood pressure
    - Pulse
    - Respiration
    - Skin: Color Temperature, Condition
    - Pupil
    - Pain (0 to 10 Scale)
    - **Doctor /Staff Nurse**

12. **FIVE:**
    - F: Focused Exam
    - **Doctor /Staff**
<table>
<thead>
<tr>
<th>I: Initial Assessment</th>
<th>13 If time permit do detailed physical examination</th>
</tr>
</thead>
<tbody>
<tr>
<td>V: Vital Signs:</td>
<td></td>
</tr>
<tr>
<td>Every 5 Minutes in Unstable patient</td>
<td></td>
</tr>
<tr>
<td>Every 15 Minutes in Stable Patient</td>
<td></td>
</tr>
<tr>
<td>E: Evaluate Intervention /Treatment</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Doctor /Staff Nurse</td>
</tr>
</tbody>
</table>
7. Medico Legal Cases

**Purpose:** To handle MLC properly for legal aspects

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Steps</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All cases of medico-legal importance are registered as MLC and marked as MLC. This shall be decided by RMO on duty</td>
<td>RMO</td>
</tr>
<tr>
<td>2</td>
<td>All MLC shall be treated and informed to nearest police and station</td>
<td>RMO</td>
</tr>
<tr>
<td>3</td>
<td>Medical records for MLCs are maintained separately</td>
<td>Staff Nurse</td>
</tr>
<tr>
<td>4</td>
<td>MLC records are kept in cub board with compartments identified separate from all other register and should be locked.</td>
<td>Staff Nurse</td>
</tr>
<tr>
<td>5</td>
<td>MLC records are submitted to concerned records keeper after patient is discharged</td>
<td>Staff Nurse</td>
</tr>
</tbody>
</table>
8. **Triage**

**Purpose:**

To properly identify patients and provide the care as per needs in mass casualty or disaster

**Triage:**

Triage is the process of sorting patients based on their need for immediate medical treatment as compared to their chance of benefiting from such care. Triage is done in the emergency service department, when faced with mass casualties and limited medical resources, which must be allocated to maximize the number of survivors.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Steps</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>All paramedical staff, emergency medical staff are involved in triaging of patients</td>
<td>Controlling officer of mass casualty</td>
</tr>
<tr>
<td>2</td>
<td>Patients who require emergency care with are shifted to the emergency room/ hospitals and given emergency medical care and further treatments</td>
<td>Paramedical / all involved</td>
</tr>
<tr>
<td>3</td>
<td>Patients who do not require emergency care/injured but can wait for first-aid, are given first aid on the spot and if required shifted to hospital which is competent</td>
<td>Paramedical / all involved</td>
</tr>
<tr>
<td>4</td>
<td>Patients who are dead shifted to the mortuary of near by hospital</td>
<td>Paramedical / all involved</td>
</tr>
<tr>
<td>5</td>
<td>All the cases are registered under MLC and police are informed.</td>
<td>Paramedical / all involved</td>
</tr>
</tbody>
</table>
9. Ambulance – Patient Transportation

Scope: Engineering/ Facilities

Distribution List: Emergency Room, Facilities & Maintenance

Policy:
The ambulance service provides the first point of access to health care for a wide variety of patient conditions, ranging from life-threatening emergencies to chronic illness and social care.

Key standards for ambulance services include:

a. Responding to ambulance category a (life-threatening) calls
b. Responding to non-life threatening (Category B) calls
c. Getting Emergency drugs and blood for hospital emergency
d. To provide any such service that the hospital may find deem

Protocol

a. All Ambulance drivers will be BLS trained.
b. Drivers must be in uniform and ID tag when driving the ambulance.

Responsibility for Maintenance:

1. The ambulance driver shall maintain the ambulance in clean and good condition

2. The ambulance driver is responsible to maintain 90% of the medical gas (oxygen) to the total storage capacity of Oxygen. If the level of the Oxygen storage goes less than 50% the ambulance driver requests the Facility Staff to replace a 100% full refilled Oxygen cylinder

3. The ambulance driver has to ensure the pneumatic pressures of the wheels are within stipulated pressure. If found less it is to be notified and refilled with informing the ER medical officer movement accompanied with a trip sheet

4. The ambulance driver has to upkeep all the non clinical equipments inside the ambulance if in case of any malfunction it is to be reported to facility department with duly filled work order form.

5. The ambulance driver shall check the brake-oil level, Engine oil level, Wheel pneumatic pressure. Engine coolant, oxygen level, fuel level, siren, lights ups charge and the equipments in the ambulance every shift.

6. The ambulance Driver shall upkeep and maintains all the documentation relating to the ambulance

7. The ambulance driver shall always maintain the adequate fuel in ambulance and procures diesel as and when it reaches the safe minimum level of stock
8. The ambulance driver requests for the diesel indents from the support service manager as and when ambulance diesel stock level goes below the safe stock level. The diesel is got filled from the authorized vendor decided by the Administration.

9. The movement of ambulance for the refill of the fuel is to be notified to the Emergency room medical officer and accompanied with a trip sheet.

**Emergency Calls:**

10. The Emergency ambulance call is received in the Reception then the time and Number of the caller is noted down by the customer care personnel and then the call is transferred to the Emergency room Medical Officer.

11. The Emergency room medical officer collects the exact address location and landmark etc., from the caller and advices for the precautions to be taken to patient.

12. The Ambulance driver reports to the support service manager and work assignment are done by the Emergency room medical officer.

13. All the movements of the Ambulance are controlled only by the emergency room, medical officer. Apart from the Emergency room medical officer the support service Manager can control the movement in conjunction with the ER Medical Officer.

14. All the patient calls that are entertained by the hospital are considered load and go situation so the patient is picked up and moved to the hospital as soon as possible.

15. The ambulance driver may assist on all the load-and –go situation in scene  of emergency.

16. The ambulance will not move out of the hospital without the trip sheet when patients are being transferred. However for non patient related trips signature will be taken in the ambulance register/log book.

17. The Emergency room medical officer summons the Ambulance driver and hands him over the trip sheet and briefs the Ambulance driver of the location and landmarks etc.

18. On the receipt of the trip sheet and being briefed by the ER medical officer the ambulance driver does all the pre-departure check and brings the ambulance to the front courtyard of the emergency department.

19. Picks up the Waiting nurse, where applicable, in courtyard and drives to the destination to pick up the patient safely and as fast as possible.

20. The Emergency drugs and the Clinical therapeutic, diagnostic equipment will be kept in the ER and will be moved into the ambulance only during calls. The ER room staff nurse will be responsible for the same.
21. The ambulance driver will have to assist in-shifting of the patient as directed by the Emergency room medical officer.

22. All communications are done from the ambulance to the ground station through the CUG phone in procession with the Ambulance driver.

23. The patient when being brought is wheeled in and loaded in the ER trolley and the Ambulance driver sets back all the system in the ambulance and cleans the ambulance with the assistance of the house keeping personnel inside the hospital. this cleaning operation shall not exceed 20 min.

24. In case of any planned shifting and transfer of the patient all the modalities are worked out by the medical officer in conjunction with the respective departments.

25. The ambulance driver will be informed by the ER medical officer and handed over trip sheet on the receipt of the trip sheet the ambulance driver brings the ambulance to the courtyard and takes the trolley to the pick up point of the patient inside the hospital and moves the patient accompanied by the nurse/doctor to the ambulance and proceeds. In this operation the Ambulance driver will not be liable to satisfy any clinical documents or requirements.

26. In case of any purchase of pharmacy drugs and Blood done by the ambulance team, the medical officer shall fill in the trip sheet and handover the requisite prescription and cash and briefs the ambulance driver as to where and when and how to get it.

27. In case of non emergency planned pick up of the patient the Ambulance driver may be informed in prior and handed over the trip sheet by the medical officer not exceeding 48 hours in advance.

28. Outsourcing of ambulance will be done in case of non availability of hospital ambulance. Formalities regarding arrangement of an outside ambulance will be done by the facilities department.

29. In the Transfer in and shifting in of the patients to whatsoever reason outside the hospital premises the patient is always accompanied by Nurse / doctor. (In Case of Cardiac Case)

30. For referral—the referral hospital must be informed before sending the patient.

31. Staff accompanying the patient must be seated at the back with patient.

32. Only one person will be allowed to accompany the patient in the ambulance. Relatives accompanying the patients to do so at their own risk.

33. Ambulance will carry only live patients.

34. Sirens – Silent – empty. Only lights on-cold case. Siren on-if carrying ill case and/or to clear traffic.
35. Refer to 102 (BLS) and 108 (ACLS) ambulance transportation for related transport.
10. **Cardio-Pulmonary Resuscitation: Code Blue**

**Scope:** Hospital Wide

**Distribution list:** All Departments

**Purpose:**

To establish criteria for management of a patient who has cardiac arrest or respiratory arrest.

a. **Team:**
   i. Medical officer (E.R)
   ii. Anesthetist
   iii. ICU nurse
   iv. Nurse from the patient’s unit

**Procedure**

b. **Staff nurse 1 who finds patient in collapsed state:**
   i. In ward, press nurse call bell at bedside or call for “HELP”. Does not leave patient, inform another nurse to initiate CODE BLUE.
   ii. Check vital signs.
   iii. If the patient has vomited, put him in left/right lateral position and apply suction to clear the airway.
   iv. Maintain the airway - tilt head back, put in an airway. If patient is an RTA case, take care of the neck using jaw thrust technique to open the air way.
   v. Assess for breathing, pulse – if no breath sounds are heard and femoral/carotid pulse is not palpable, commence CPR.

c. **Staff nurse 2 calls telephone Operator to announce “CODE BLUE”**.
   i. Operator will announce CODE BLUE thrice–stating patient unit & bed number.
   ii. Operator informs MO in ER, Anesthetist on call & Consultant in charge of the patient.
   iii. Nurse 2 to push Emergency (crash) cart to patient’s bedside.
   iv. Connect to cardiac monitor - note BP, pulse, oxygen saturation. If cardiac monitor is not available, the paddles of the DC defibrillator will be used for a quick assessment of the ECG status to rule out the presence of VT/VF
   v. Nurse 1 will start Ambu bagging and nurse 2 initiates cardiac massage.

d. **Staff nurse 3 (ICU nurse) will get ETT, laryngoscope, gel, syringe and tape ready for intubation.**
i. Set up IV line; use IV cannula of 18 or 16 gauge if none is in place.
ii. Prepare emergency drugs – as required.

e. **Doctors - on hearing CODE BLUE announcement, doctors (M.O.) in the hospital area will proceed to the site immediately.**

First doctor (M.O) who arrives will assess the patient's condition and function as team leader until the arrival of the anesthetist who will then take over as team leader.

i. Doctor will do/request intubation if patient is not breathing and decide to defibrillate if necessary.
ii. Drugs to be started as situation demands.
iii. Nurses to prepare and administer drugs.
iv. Continue CPR until patient’s condition stabilizes and then shift to ICU.
v. If the patient has not responded at all after 30 minutes of vigorous efforts, the team leader will review the situation and if the situation so warrants, will take the decision to stop CPR.

f. **Nurse Supervisor**

a. Controls the crowd,
b. Get assistants as required.
c. Start documenting the event activities.
d. Arrange for stand by team:
   i. Radiology tech
   ii. Laboratory tech
   iii. Maintenance
   iv. Security
   v. House keeping

e. In the event of death of patient - cause of death is to be determined by consultant in charge of patient.

f. All Code Blue situations will be evaluated by a multi-disciplinary committee consisting of the following after the event is over:-

i. Medical Director
ii. Consultant in-charge of the patient
iii. Internist Anesthetist
iv. Nurse Manager

g. Corrective measures will be implemented, if indicated, after the above analysis
11. Rational Use of Blood and Blood Products

Scope: Hospital wide

Distribution list: Nursing, Laboratory

Policy
a. Request

i. To ensure patients safety, blood / blood components should not be prescribed unless there is a real indication.
ii. Request should be made by a consultant
iii. Blood transfusion request form should be filled completely by a doctor
iv. Consent for transfusion should be taken from patient / guardian after explaining the transfusion requirement or doctor can give consent in case of unaccompanied patient who are incapable of giving consent.

v. Blood sample should be taken for ABO & Rh grouping and cross matching and labelled at bedside.
vi. The entire request for blood / blood component should be sent with the relatives to Blood Bank.

b. Grouping

All patients should be grouped in case:

i. Any intermediate or major surgery is planned
ii. Any invasive procedures are planned where a risk exists such that blood transfusion is a possibility.

iii. Transfusion of blood / blood components is planned
iv. The patient is diagnosed with a medical disease with likelihood of blood / blood components transfusion requirement.

c. Blood Reservation

Blood should be reserved before all elective surgeries. The procedure will be as under:

i. The requisition for blood along with the consent form duly signed by the recipient and the blood sample will be sent to the Blood Bank immediately on admission / when the need for transfusion is established.
d. Procedure before Transfusion

i. Blood / Blood components should be checked by the doctor and the following details should be verified: blood bag with patients blood group, Name, Registration Number for correct identification of recipient, date of bleed/cm/ecptry/certification of cm.

ii. Check BP / Pulse / Temperature and record in the case file before transfusion.

e. Procedure During Transfusion

i. Monitoring of vitals can be done by nurses

ii. Visual observation is often the best way of accessing the patient during transfusion.

iii. Record base line observations at the start of each unit of transfusion. Temperature/ Pulse should be measured 15 minutes after the start of each unit and hourly thereafter. Monitor rate of flow to ensure transfusion progress. Under no circumstances should any drug be administered through the same IV line.

iv. Management of Blood transfusion reactions:

- Steps 1 - Stop transfusion
- Step 2 - Keep IV line open with 0.9 % NaCl
- Step 3 - Notify attending physician and blood bank. If transfusion is terminated
- Step 4 - Send freshly collected post – transfusion sample of blood (preferably from opposite arm) and sample of urine to blood bank.
- Step 5 - Send the residual blood component unit along with administration set to blood bank.

<table>
<thead>
<tr>
<th>Reaction</th>
<th>Signs &amp; Symptoms</th>
<th>Aetiology</th>
<th>Clinical Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>Allergic</td>
<td>Pruritus, urticaria</td>
<td>Antibodies to platelets,</td>
<td>Follow steps 1 – 3 Administer antihistamines (oral IM or IV) Resume transfusion if improved If no improvement after 30 min, treat as under</td>
</tr>
<tr>
<td></td>
<td>(Hives)</td>
<td>plasma proteins</td>
<td></td>
</tr>
<tr>
<td>Allergic or</td>
<td>Anxiety, Pruritus,</td>
<td>Antibodies to</td>
<td>Follow steps 1- 5 Administer</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Febrile

- Fever, chills, agitation, flushing, hives, tachycardia, mild dyspnoea, hypotension anaphylaxis
- Platelets, plasma proteins (usually IgA)
- Antihistamines, antipyretics, vasopressors and corticosteroids as needed. Avoid future reaction with washed packed cells or other specifically prepared components.

### Acute Hemolytics

- Anxiety, chest pain, headache, dyspnoea, chills, fever, red urine, agitation, shock, hypotension
- Gram negative sepsis, hemolytic
- Follow steps 1 – 5 Treat shock with vasopressors, IV fluids and corticosteroids as needed.

### Unexplained Bleeding, Hemoglobinemia

- Transfusion reaction
- Maintain adequate airway, increase renal blood flow with IV fluids, furosemide, mannitol, maintain brisk diuresis. If DIC is present, consider heparinisation. Monitor renal status for acute renal failure requiring dialysis. Administer blood components (FFP, platelets etc) as needed.

#### f. If no reactions complete transfusion, fill the feedback form and send it to the blood storage center.

#### g. Whole blood / packed cells can be transfused over 3 – 4 hours.

#### h. FFP / Cryo: Can be issued within 30 minutes, Should be transfused immediately. If not used can’t store again, will not be accepted by the blood storage center.

#### i. Blood should only be warmed using a specifically designed commercial device with a visible thermometer and audible warning. Blood must not be warmed by insertion in hot water, microwave or on a radiator.

#### j. Blood giving set must be changed every 2 units or at least every 12 hours.
12. Admission and Discharge Criteria in ICU

**Purpose:** To define criteria for admission and discharge in ICU, and define management of beds during shortage

**Scope:** Hospital wide

**Responsibility:** Doctors and Nurses

**Policy**

**Admission Criteria in ICU**

Patients can be admitted to the ICU directly from the Emergency Room or from Operating/Procedure Room and wards. Patients requiring intensive monitoring and elective ventilation post operatively will also be admitted to the ICU. The criteria for admission will be as under:

- **a.** Patients requiring intubation or already intubated
- **b.** Patients requiring mechanical ventilator
- **c.** Patients requiring non-invasive ventilation for the first time after hospitalization
- **d.** Unstable patients with cardiac ailments
- **e.** Patients with altered sensorium who may require isolation of airway.
- **f.** Patients in hypotension due to cardiac, traumatic or haemorrhagic causes.
- **g.** Patients who have undergone tracheostomy in this hospital be admitted at least for 24 hrs after tracheostomy.
- **h.** Patient requiring intensive monitoring only in the form of ECG, continuous BP monitoring, SpO2, and CVP monitoring.
- **i.** Patients with altered sensorium with reasonable chance of quick recovery such as hypoglycemia, TIA, CVA.
- **j.** Patient stabilized but requires close monitoring or non-invasive ventilation.
- **k.** Patient on tracheostomy and spontaneous mode of breathing with copious secretions through tracheostomy.
- **l.** Patient deteriorated in the ward and requires close monitoring, inotropic and face mask oxygen support.
- **m.** Only patients requiring ventilation will be admitted in ICU1 Category. Patients requiring only intensive monitoring will be admitted in ICU 2 Category, however, such cases may be admitted ICU 1 Category Bads if beds in ICU 2 Category are full.

**Discharge Criteria from ICU**

Patients admitted to ICU 1 Category can either be discharged to ICU 2 or ward depending on his/her clinical condition. Patients in ICU 2 Category Beds can be discharged to ward or for home. Patients, who may again require ventilation, may be shifted to ICU 1 Category. The criteria for discharge from ICU are:-
a. Improvement in clinical status

b. Improvement in Respiratory state such that there is no requirement of mechanical ventilation. (I.e. patient stable with good SpO2 for 24 hrs after extubation.)

c. Patient maintaining good PH, PaO2, PaCo2 with reduction in respiratory distress and improvement in neurological status on non invasive ventilation.

d. Patient with stabilized blood pressure without inotropes.

e. Bleeding is controlled.

f. Tracheotomy functioning well and there is no requirement of any external support of ventilation.

g. The patient has improved to such an extent that he/she is stable without any support

h. (for maintenance of blood pressure or respiration).

i. The monitoring over the past 24 hrs has been within physiological limits, i.e. blood pressure well controlled, ABG within normal limits, no deterioration in neurological status.

j. Patients requiring low levels of non invasive ventilation.

k. When patient wants to go on discharge against medical advice.

l. When relatives want to take the patient to other institution or discharge against medical advice (condition only arises, in case patient is unconscious or may fall under the category of vulnerable group).

m. When the treating physician opines for transfer to other super specialty centre for further management.

13. **NICU Guidelines**

**Scope**: Nursing, Pediatrics and Neonatology

**Policy**:

a. **Services**

Care of newborns without any acute problems born by normal delivery or caesarian sections. Immediate management of unanticipated complications arising in a newborn baby.
Diagnosis and management of selected at-risk pregnancies and neonatal conditions. Intensive care including ventilation for up to two babies at a time.

b. **Staff:**
   
   i. Consultant staff available in the hospital from 0800 hrs to 2000hrs. Between 2000 hrs and 0800 hrs Consultants are available on call and will be able to reach the hospital within 30 minutes of a call. (02 Consultants)
   
   ii. Consultant staff attends periodic conferences and courses to update skills.
   
   iii. Duty Doctors are available in hospital premises 24 hours.
   
   iv. Suitably qualified and experienced nursing staff who are experienced in neonatal resuscitation provide care in the birthing areas and NICU.

c. **Diagnostic Services:**
   
   i. Personnel capable of determining blood type and cross-matching blood available on a 24 hours period, with blood storage facility.
   
   ii. Radiology technician to perform portable X-rays on a 24-hour basis.
   
   iii. Blood gas machine

d. **Equipment:**
   
   i. Equipment for resuscitation
   
   ii. Incubator/radiant warmers
   
   iii. Venous access and emergency intravenous infusion
   
   iv. Equipment suitable for hand ventilation
   
   v. Oxygen therapy
   
   vi. Oxygen saturation monitoring with a neonatal probe
   
   vii. Blood glucose monitoring
   
   viii. Portable X-ray facilities
   
   ix. Equipment suitable for drainage of apneumothorax
   
   x. Non-invasive blood pressure monitoring
   
   xi. Head box
   
   xii. Mechanical ventilator
   
   xiii. Phototherapy unit
   
   xiv. Equipment for gavage feeding
   
   xv. Camera to provide instant photographs.
xvi. Portable ECHO facility
xvii. Cardio-respiratory monitors

e. Facilities:
  i. One pair of wall mounted electrical outlets for each infant station
  ii. One wall mounted compressed air outlet and one suction outlet and one oxygen source for each infant station.
  iii. Radiant warmers with lighting for each neonate
  iv. A wash sink, soap dispenser, paper toweling, waste receptacle, sharps disposal container
  v. X-ray viewing box
  vi. Discreet room appropriately equipped for expressing breast milk.

f. Support Services:
- Neonatal surgical / anaesthetic services
- Ophthalmic services for ROP screening
- Infection control
- Pharmacy services
- Technical equipment support services/Biomedical engineer
- Gestation 32 weeks or greater
- Newborn infants requiring:
  - Incubator care, either because they are sick or preterm oxygen therapy (not exceeding 60 per cent)
  - Cardio respiratory monitoring
  - Intra-arterial blood gas monitoring
  - Non-invasive blood pressure monitoring neonates with apneas ventilator care
  - New born infants requiring specialty services:
    - Exchange transfusion
    - Nasal continuous positive airway pressure (CPAP).
14. Vulnerable Patients

The hospital ensures that vulnerable patients (elderly, physically and / or mentally challenged and children) are protected from abuse, which we define as a violation of an individual’s human or civil rights by any other person or persons. A coordinated approach is used to manage any reported instance or suspicion of abuse against vulnerable patients admitted to the hospital. Hospital has a sensitive, multi professional approach in dealing with disclosures of abuse or possible abuse. This is aimed to:-

- Protect the vulnerable patients from abuse
- Respond quickly and sensitively to any incident or suspected case of abuse `to enable joint working of hospital personnel with external services when necessary.

Safe and Secure environment for vulnerable patient

- To ensure a safe environment for all vulnerable patients the hospital trains all staff members to be sensitive to such matters.
- Providing beds with guard rails are available and used when the need arises.
- Documented procedures are available for restraining patient safely if the need is Felt.
- Provision of facilities and on-site inspections to the vulnerable group of patients such that they are safe from abuse, are ensured by the management.

Informed Consent

- In cases where the vulnerable patient is not mentally competent, informed consent is obtained from the lead caregiver and the procedure for this is documented.
- In case the vulnerable patient is mentally competent informed consent is obtained from the patient or patient attendant for all actions to be taken. It is ensured that while doing so the patient understands that he / she have a right to reject offers of assistance and to refuse intervention.

Training Of The Staff

Staff should be trained for care of vulnerable patients with respect to

- Understanding and recognizing vulnerable patients
- Principles of staged, step down care
- Moving and handling of vulnerable patients.
- Training in prevention and management of
  - Falls,
  - Unconscious patients
  - Decubitus ulcer/ pressure sore
  - Interaction with caregeiors
Procedure to follow in case of abuse of vulnerable patient

- When a case of abuse of a vulnerable patient is suspected or disclosed, the main consideration is the protection of the vulnerable patient.
- When such an event occurs, the senior member of the nursing team on duty is immediately informed. She / He will then inform the Consultant / RMO / Manager / IPD In charge. The concerns are documented in the medical records by the first person to report the abuse.
- The IPD In charge / RMO and Clinical consultant form the investigating team. The RMO decides whether social services or the police need to be informed.
- A detailed investigation is carried out.
- If the vulnerable adult is judged to be mentally competent, he can reject offers of assistance and refuse intervention.
- All these proceedings to be recorded and maintained by RMO/IPD In charge.

15. Obstetric Care – Scope of Services

Purpose: To define the scope of services for high risk obstetric care for the organization

Scope: Nursing, OBG

Responsibility: Nursing, OBG

Policy:

1. Staff:
   a. Consultants: fulltime, part-time and visiting consultants of varied experience are available in the hospital between 0800 hrs and 1600 hrs. Between 1600 hrs and 0800 hrs consultants are available on call and will be able to reach the hospital within 30 min.
   b. Duty Doctors: are available in the hospital premises 24 hrs.
   c. Nurses: Suitably qualified nurses, experienced in mid-wife provide care in the delivery suites and women’s wing.
   d. Pediatric consultants are available 24 hrs for neo natal care.
   e. Anesthetists trained in labour analgesia attend to patients requiring the same round the clocks.

2. Diagnostic Services:
   a. 24 hr laboratory services for routine and urgent tests, like clotting profile.
   b. Radiologists to perform USG on a 24 hr basis.
   c. Blood and blood component storage facility and facility for cross matching.
3. Support Services:
   a. NICU/ Surgical/Anesthetic services
   b. Infection control
   c. Pharmacy
   d. Technical equipment support services

4. Equipment
   a. Motorized labour cots with domed lights/ spotlights
   b. CTG monitors
   c. Crash cart
   d. Centralized oxygen and suction
   e. Infusion pump and syringe
   f. Equipment for instrumental vaginal delivery
   g. Entonox
   h. Delivery kit / delivery set

5. Provision of care
   a. **Out Patient Services**
      - Preventive Healthcare
      - Family Planning
      - Genetic Counselling
      - Preconception Counselling
      - Antenatal Care
      - High Risk Pregnancy
      - Multiple Pregnancy
      - Growth Retardation in Pregnancy
      - Cardiac Patients
      - Renal Patients
      - Diabetic Patients

   b. **In Patient Services**
      - Painless Labour
      - intrapartum Care (intense foetal and maternal monitoring)
      - High Risk Obstetrics Care—
        - Cardiac Patients
        - Renal Patients
        - Diabetic Patients
        - Multiple Pregnancy
        - Premature Labour
16. **Administration of Anesthesia Procedure and Monitoring**

**Policy**

**Purpose:** To define the guideline for administration and monitoring of anesthesia

**Scope:** Nursing and Anaesthesia

**Responsibility:** Same as above

1. Anaesthesia will be administered in Operation room and Cath lab only.
2. It will be administered by Anesthesiologist only.
3. Anaesthesia will be either general, spinal, epidural and dissociate regional or sedation.
4. During any anaesthesia procedure BP, Pulse, SpO2 and ECG will be monitored. Patient receiving anaesthesia through endotracheal tube, LMA, Tracheostomy will have ETCO2 monitoring.
5. Emergency crash cart with defibrillator will be available in the Operation room and Cath lab.
6. Central venous pressure, Arterial pressure will be monitored in deserving cases.
7. Patients will be pre-medicated in ward as per Anesthesiologists instructions.
8. The procedure for general Anaesthesia administration will be:
   a. Induction: Thiopentone / Propofol + Medazolam + Analgesics.
   b. Intubation: Where required- Scolene / Atracurium / Vecuronium
   d. Neuromuscular block will be reversed with the Neostigmine and Glycopyrollate, where non depolarizing relaxants are used.
   e. Recovery from Anaesthesia and neuro-muscular blockade will be assessed clinically and patient shifted to the recovery room.
9. Following steps will be followed during Regional, Spinal, Epidural Anaesthesia:
   a. Strict aseptic precautions will be followed.
   b. Patient will be properly positioned for the procedure.
   c. The administration of Regional and central neuronal blockade will be in accordance with the documented practice.
   d. Level and adequacy of the blockade will be reviewed and done before the Operating procedure.
   e. Inadequate blockade will be supplemented with General Anaesthesia or Sedation.
   f. All monitoring as for general Anaesthesia will be followed.
   g. The recovery room protocol will also be followed.
   h. Resuscitative equipment, ETT, Laryngoscope will be readily available.
10. For patients undergoing local anaesthesia with sedation the following method will be adhered to
   a. All monitoring and resuscitative equipment must be available in OT.
   b. Endotracheal tube, laryngoscope, oxygen and means for ventilation (Anaesthesia machine) must be available.
   c. Patients will be induced to sedation using inj Propofol 1.5-2.5 mg/kg bolus after the operating area has been cleaned and draped.
   d. Local infiltration will be done only after sedation.
   e. Continuous infusion of inj propofol to titrate adequate sedation without respiratory or cardiovascular compromise will be achieved.
   f. Infusion will be stopped once the procedure is completed.
   g. All monitoring intra op and post op as done for GA will be followed.

17. **Prevention of Wrong Patient, Wrong Site Surgery**

**Purpose:** To protect the patient from injury related to wrong patient & surgical procedure/site/side surgery.

**Scope:** Operating Rooms and all Procedure areas

**Responsibility:** Nursing, OR

**Procedure:***

1. **Identification of Patients**
   a. A registered nurse will identify the patient:
      i. On arrival in the pre-operative area
      ii. On arrival in the procedure room or operating room
      iii. On arrival in Recovery room
   b. Identification of a patient is achieved:
      i. For responsive patients, by:
         o Asking his/her first & last name
         o Comparing these responses to the identification band.
         o For inpatients, also compare the medical record number on the identification band with the medical record/chart.
      ii. For non-responsive patients (e.g. infant, comatose patient), by:
         o Asking a family member or significant other the patient’s name
         o Reviewing the patient’s medical record if a family member or significant other is not available.
2. Surgical Site Marking

a. Where practical, the surgical incision site(s) or area will be marked when procedures involve right/left distinction, multiple structures (such as, fingers and toes), and levels (as in spinal procedures).

b. The area will be marked using an indelible marker for the correct site/side.

c. For hospital inpatients:
   i. The surgeon obtaining the informed consent will mark the correct site with the word at the time the consent is signed.
   ii. On the evening before surgery, the unit nurse will verify that the surgical site is marked. If it has not been marked, the physician involved with the surgery will be notified.
   iii. The unit nurse completing the Pre-Operative Checklist must verify that the site of surgery has been marked. If it has not been marked, the physician involved with the surgery will be notified. If the physician is not available to mark the site, the nurse will notify the appropriate operating room.
   iv. In the Preoperative Holding Area, the nurse checking in the patient will, after identifying the patient, verify that the operative site/side has been marked and is in agreement with:
      - The statement of patient, family member or significant other.
      - The medical record including imaging studies, if available, informed consent, history and physical.

d. For patients being admitted for Day Care Surgeries, a physician who will be involved with the surgery should mark the surgical site on the morning of surgery. If the physician is not available, the nurse caring for the preoperative patient will:
   i. Review the surgery schedule for the procedure and site/side of surgery.
   ii. Interview the patient, family member or significant other, confirming the patient’s identity.
   iii. Review the medical record (i.e. consent, Pre Procedure Assessment, history and physical, and imaging studies, if applicable).
iv. Mark the correct surgical site using indelible ink in a manner that will allow the mark to still be seen once the patient is prepped and draped.

v. NOTE: The nurse marking the patient must be the same RN who verified that the, surgery schedule, statement of the patient or family member or significant other, and the medical record are in agreement.

3. The circulating nurse will:
   a. Review the surgery schedule.
   b. Identify the patient.
   c. Confirm that the site/side of surgery has been marked.
   d. Review the medical record (informed consent, and history and physical) for type and site/side of surgery.
   e. Verify with the patient, parent or guardian (if present) that the procedure and site/side of surgery to be performed agree with the medical record.
   f. Write on communication board in operating/procedure room:
      i. Patient name
      ii. Procedure(s) planned and the site as appropriate
   g. Verify the patient MRN is correct prior to opening the electronic chart.

18. Patient Restraint Policy

Purpose

- To prevent interference /obstruction with medical treatments (such as self extubation and decanulation).
- To protect medical devices (such as intravenous lines, in - dwelling urinary catheters, and feeding tubes).
- To prevent falls and injury of any kind.
- To control disruptive behavior (such as agitation, wandering, and combativeness).
- To preclude the possibility of harming self, staff and other patients

Scope: All patients admitted to the hospital

Responsibility: Nursing staff, Physicians, Support Staff

Definitions: Restraint is...
Any involuntary method (chemical or physical) of restricting an individual's freedom of movement, physical activity, or normal access to the body.

**Chemical restraint:**
The use of a sedating psychotropic drug to manage or control behavior. Psychoactive medication used in this manner is an inappropriate use of medication.

**Physical restraint:**
The direct application of physical force to a patient, without the patient's permission, to restrict his or her freedom of movement (JCAHO, 2000). The physical force may be human, mechanical devices, or a combination thereof.

**Policy:**
- Patient dignity should be maintained during restraint.

**Physician Orders**
- Restraints shall be applied with only a physician's order that defines the reason for restraint, less restrictive alternatives, attempted/considered, type of restraint to be used, and duration for which the restraint may be applied.
- This time limit shall not exceed one calendar day, after which new orders are required if restraints must be continued.
- In emergency situations, (i.e., self-extubation), if the physician is not available to issue the restraint order, restraint is initiated by a registered nurse based on an appropriate assessment of the patient.
- In that case, the physician is notified within 12 hours of the initiation of restraint and a verbal or written order is obtained from that physician and entered into the patient's medical record.
- If a renewal order is required after the initiation of restraint, the first renewal order must be obtained within one calendar day of initiation.
- Verbal restraint orders must be co-signed by the physician within 24 hours of the initiation of restraint.
Device Application:

Restraint shall be applied only by staff who have appropriate training and knowledge of using restraints.

Ongoing Care and Monitoring:

Patients shall be monitored at least every two (2) hours to determine the following and make adjustments as necessary:

- Position, circulation, and skin integrity of restrained area
- Maintenance of privacy and comfortable body and room temperature.
- Appropriate application of the device(s).
- Toileting and fluid needs.
- Nutrition
- Range of motion
- Restraint reduction or removal
- Documentation in the medical record shall reflect the required monitoring.
- Patients shall be positioned for safety and comfort.
- Patients shall have active or passive range of motion to the affected joint(s) as medically necessary.
- The patient and/or family, whenever possible, shall be educated regarding:
  a. Reason for restraint
  b. How the patient/family can avoid restraint
  c. Criteria necessary for release from restraint.

Reassessment of Use:

The Consultant, in collaboration with the health care team, shall evaluate the patient at the end of the prescribed duration of restraint to determine the need for continued use of the device(s). If restraint remains necessary, the order must be renewed. In the absence of order renewal, restraints shall be removed by the responsible Nursing staff.

Reapplication of Restraint

- The patient is continually assessed to ascertain his or her condition and to determine if restraint can be discontinued.
- If a patient, who was recently restrained, must be placed back into restraints, a new physician order is required.
A temporary release that occurs for the purpose of caring for a patient’s needs (e.g., toileting, feeding, and range of motion) is not considered a discontinuation of the intervention.

Assessment, Care, and Monitoring Definitions:

Each aspect of patient assessment and care is considered complete and may be initialed when the following criteria have been met:

- Position: Proper alignment of the restrained limb(s) is maintained.
- Circulation: The affected limb(s) has been checked and device application has been determined not to impair circulation to the extremity:
  a. Nail bed blanched in less than 3 seconds
  b. Pulse is present above and below restraint.
  c. Skin Integrity: Skin integrity has been checked under and around the device(s), and at all bony prominences and no pressure or reddened areas have developed.
  d. The patient is covered either by gown, sheet, or curtain and is protected from public view.
  e. Temperature: The patient’s skin is comfortable to the touch. The patient's body temperature is checked as ordered by the physician, and the room temperature is maintained as appropriate to patient’s condition (generally 68-72°F on the room thermostat).
  f. Device Application: The device is applied according to the manufacturer’s guidelines and in a manner that is secure but not tight. Straps are secured to bed or chair frame (never to side rails or other moveable parts); and quick release is possible.
  g. Fluid Needs: Fluids are administered as ordered by the physician. If the patient is not on fluid restriction, oral fluids are offered at least every two hours. If the patient is nothing-by-mouth (NPO), oral care is provided at least daily to maintain integrity of oral mucosa.
  h. Toileting Needs: Elimination needs are attended to, either by Foley catheter (only if ordered for other medical necessity) or by offering the patient the bed pan or assistance to bathroom or bedside commode chair.
  i. Nutrition Offered: Nutritional needs are met as ordered by the physician. If oral intake is allowed, the patient is offered and assisted with meals and snacks.
j. Range of Motion: Active or passive range of motion in the affected limb(s) is completed either by the patient or the caregiver. For patients requiring limb restraints, ROM is recommended at least every 4 hours.

k. Evaluation for Restraint Reduction or Removal: Need for the use of restraint(s) is evaluated frequently (at least every two hours) and restraints are discontinued at the earliest possible time.

l. Restraint Status: A plus sign (+) is recorded when restraints are on; a minus sign (−) when they are off.

m. Caregiver initials are recorded at the bottom of the column to indicate the caregiver completing the assessment of care. The full signature, title, and initials are recorded at the bottom of the page.

n. Narrative note space is used for detail the care giver deems relevant, e.g., additional assessment data, explanation of patient/family discussions, exceptional findings in ongoing care and monitoring, etc.

o. A narrative note is recommended at the time restraints are discontinued and should reflect any changes in patient condition related to the decision to discontinue the use of restraints.

Guidelines for Chemical Restraints

Chemical restraints are any medication used for the purpose of restraining patients involuntarily to prevent them from harming themselves or staff. The intent of such medications is long duration of action compared to the brief conscious sedation commonly used to facilitate procedures such as suturing, scanning, and joint reduction.

Advantages of chemical restraints

- Control violent behavior and patient agitation
- May reduce need for physical restraints
- Allow examination and performance of radiographic imaging

Disadvantages of chemical restraints

- May result in complications, such as respiratory depression and loss of gag reflex
- Occasional paradoxical reaction results in increased agitation
- Limit mental status assessment and neurologic examination during sedation
Agents

A myriad of medications can be used to sedate patients. The ideal agent would last two hours, be easily reversible, be available intravenously (IV) and intramuscularly (IM), not depress respirations or gag reflex, not result in hypotension, and not require cardiac monitoring. Unfortunately, no agent is ideal. Agents commonly used to achieve rapid tranquilization fall into categories of major tranquilizers/neuroleptic agents and benzodiazepines. Major tranquilizers/neuroleptic agents

- Haloperidol (serenace) decreases agitation and violent behavior and often is prescribed for acutely psychotic patients. Haloperidol can be used to reduce violent behavior in severely intoxicated patients.
  - Adult dose is 2-5 mg IM; depending on patient response, subsequent doses can be administered as often as every hour, although every 4-8 hours may be satisfactory.
  - Onset of action occurs within 1 hour.
  - Duration of action is 4-8 hours.
  - Adverse effects include extrapyramidal symptoms (eg, dystonic reactions, akathisia), hypotension, prolongation of QT interval, lower seizure threshold, and anticholinergic effects.

- Benzodiazepines

  - Diazepam (Valium) is widely used for sedation, treatment of agitation secondary to alcohol withdrawal and treatment of seizures. It has a high therapeutic-to-toxic ratio. Respiratory depression and impaired gag reflex are rare when used alone.
    - Adult dose is 2-10 mg IV/IM; titrate dose if IV.
    - Onset of action is 1-5 minutes for IV dose.
    - Duration of action is 30-60 minutes for IV dose.
    - Adverse effects include interactions with other sedatives, which commonly result in respiratory depression and loss of gag reflex, exacerbation of glaucoma, and paradoxical reactions.

  - Lorazepam (Ativan) is commonly used to sedate elderly patients and has a wide safety margin. Respiratory depression and loss of gag reflex usually do not result if recommended doses are used. Duration of action is long.
    - Adult dose is 0.5-4 mg IV/IM; titrate dose if IV.
    - Onset of action is 5-10 minutes for IV dose.
Midazolam (Versed) is commonly used for rapid sedation in emergency settings because of its rapid onset and brief duration of action.

- Duration of action is 4-8 hours.
- Adverse effects include exacerbation of glaucoma, respiratory and gag reflex, depression (especially when combined with other sedatives or narcotics), and fetal damage.
  - Adult IV dose is 1-2.5 mg initially over 2 minutes; reduce dose if patients are elderly or debilitated; allow 2 or more minutes to evaluate response; titrate slowly.
  - Adult IM dose is approximately 5 mg; reduce dose if patients are elderly or debilitated.
  - Onset of action is 1-5 minutes for IV dose and 15 minutes for IM dose.
  - Duration of action is 30-60 minutes.
- Adverse effects include respiratory depression (especially when combined with other sedatives or narcotics) and exacerbation of glaucoma.
  - Alprazolam (Xanax) often is used to reduce anxiety. It is not an effective medication for sedation or chemical restraint in the emergency department. Alprazolam is not available for IV or IM administration.

Precautions

- Patient dosing is very variable. More medication may be administered if inadequate sedation results after initial dose.
  - Monitor for respiratory depression and loss of gag reflex.
  - Immediate inadequate sedation may not mean that medication is inappropriate for the patient. The peak effect may be delayed, or additional doses may be required.
  - Consult appropriate references for full prescribing and adverse effect information.
  - Chemical restraints can be an effective adjunct or replacement for physical restraints.
19. **Pain Management Policy**

**Purpose**

To provide guidelines for a comprehensive approach to the needs of patients who experience both acute and/or chronic pain.

**Scope:** All patients undergoing treatment at the hospital.

**Responsibility:** Nurses and Physicians

**Policy**

Pain management is an integral component of patient care. Staff recognizes the patient’s right to pain assessment and appropriate management. The patient’s pain is identified in the initial screening/assessment and reassessments done as needed. All caregivers monitor patient’s pain and take appropriate actions.

**Guidelines**

I. Pain is generally managed by a physician. Consultation is available from the Department of Anesthesia for additional help.

II. Pain Assessment

1. Inpatient Areas
   a. Assess patients for comfort in an ongoing manner. Screen all patients for pain on admission to the hospital. Thereafter, monitor the patient for pain:
      i. At least once every shift.
      ii. When an intervention or treatment to relieve pain is provided.
      iii. When the patient’s level or location of care changes.

   b. If the patient confirms current or recent pain at the time of admission, record a pain scale score (0-10) and additional information from screening data on the Admission History form.

   c. Patients unable to rate pain verbally (e.g., ventilator patients) may be able to indicate their level of pain on a visual scale (Visual Analog Scale) or point to the level of pain on the numeric scale.
d. Screen patients unable to rate their pain further for nonverbal and physiologic signs of pain.
e. Additional scales may be used for pediatric patients, including the Face, Legs, Activity, Cry, Consol ability (FLACC) scale (less than 5 years old), or FACES scale. Multiple scales are available for use in pediatric patients of all ages.

III. Outpatient Clinics
a. Screen patients for pain during outpatient visits, as appropriate.
b. A pain assessment is required with a positive pain screening.
c. Complete the pain assessment in the clinic, unless the follow-up plan includes referral to a pain clinic or other resource that will perform the assessment.

IV. Recommended Intervention
- Non-invasive methods (e.g., repositioning, massage, music, distraction). Assess the effectiveness of pain intervention within two hours after treatment.
- Pharmacologic Treatment
- The World Health Organization (WHO) three step analgesic ladder is recommended.

Step 1: Non opioid and adjuvant analgesics:

a. Acetaminophen and NSAIDS, are useful for acute and chronic pain due to a variety of etiologies such as surgery, trauma, arthritis, and cancer. Acetaminophen and most NSAIDS are antipyretic through inhibition of cyclooxygenase; NSAIDS, but not acetaminophen, also have anti-inflammatory efficacy.
b. A number of other classes of drugs may either enhance the effects of conventional analgesics, have independent analgesic activity in certain situations, or counteract the side effects of opioid analgesics.
c. Tricyclic antidepressants (analgesic effects), antihistamines (analgesic, antiemetic, mild sedative), benzodiazepines (anxiety and muscle spasm), and other drugs such as caffeine, dextroamphetamine, steroids, phenothiazines, anticonvulsants, and clonidine.
d. In general, nonopioid and adjuvant analgesics have a ceiling effect and do not produce tolerance or dependence.

Step 2: Low to moderate potency opioid analgesics:

a. Add low to moderate potency opioid analgesics to manage acute and chronic pain that does not respond to nonopioid and adjuvant analgesics alone.
b. Sedation, constipation, nausea/vomiting, itching, and respiratory depression are the most common side effects of opioids. Multiple pharmacologic agents may be used to treat such side effects.

c. As in Step 1, consider nonopioid and adjuvant analgesics, and continue if already being administered.

Step 3: Moderate to high potency opioid analgesics:

a. Add moderate to high potency opioid analgesics to manage acute and chronic pain that does not respond to nonopioid and adjuvant analgesics and low to moderate potency opioids.

b. Sedation, constipation, nausea/vomiting, itching, and respiratory depression are the most common side effects of opioids. Multiple pharmacologic agents may be used to treat such side effects.

c. As in Step 1, consider nonopioid and adjuvant analgesics, and continue if already being administered.

d. Replace any low to moderate potency opioids begun in Step 2 with moderate to high potency opioids in Step 3.

e. Assess the effectiveness of pain intervention within two hours after treatment.

f. If pain intervention is not effective, notify the physician.

II. Patient/Family Education:

Educate patient/family at the level of their understanding of the following:

a. How and when to request interventions for comfort/symptom relief.

b. Discharge planning addressing pain management whenever warranted by the patient’s condition:

i. Detail, in the discharge instructions, the interventions patients and families can utilize to manage pain following hospitalization.

ii. Provide the name and telephone number of the individual to contact with problems, such as excessive discomfort.

c. The Physician note may also include patient education regarding pain management.
III. Documentation:

a. In Inpatient areas, document the following with date and time:
   i. Pain screening, on the Admission History form within 8 hours of admission.
   ii. Pain assessment, at least once each shift and when there is a change in the patient’s condition or primary caregiver.

b. Discharge instructions regarding pain management, on the Discharge Instruction sheet.
   i. In Outpatient areas, document the following with date and time:
   ii. Pain screening, at every visit as appropriate.
   iii. Patient/family teaching regarding pain management, on the Teaching Record.

   iv. Discharge instructions regarding pain management, on the Post Anesthesia Discharge Instruction Sheet or Procedure Flow-sheet.

20. Rehabilitation Services

Purpose: To define the scope of services of the Rehabilitation Department in the assessment and provision of care of patients.

Scope: Hospital wide

Responsibility: Physiotherapy, Nursing

Procedure:
1. Services shall be provided according to the scope of services of Rehabilitative services.
2. A patient may directly approach the service section or may be referred by a physician/surgeon.
3. In case it is a referral from other department with in the hospital, complete record shall accompany the patient. Physician referrals must be signed by the physician and include the patient’s diagnosis and reason for referral to Rehabilitation Services.
4. In case the patient is minor, legal guardian shall accompany the patient.
5. Therapy shall be explained to the patient, before initiation, to make an informed decision.
6. Physicians who question whether a patient can benefit from Rehabilitation should consult with the department. A Rehabilitation Services consult should be ordered for patients who have:
   a. Movement Dysfunction
   b. Ambulating difficulty
c. Burns or non-healing wounds
d. Cognitive impairment
e. Developmental involvement
f. Upper extremity or hand dysfunction
g. Difficulty in functional activities including activities of daily living
h. Disability adjustment concerns

7. It is the policy of the Rehabilitation Services Department to provide a comprehensive functional assessment and assessment/evaluation for those patients requiring rehabilitative intervention.

8. Rehabilitation assessments are performed within 24 hours of consult for inpatients.

9. Rehabilitation Services are provided by qualified personnel to hospitalized patients upon physicians’ orders.

10. Outpatient therapy is available to patients unable to complete therapy while hospitalized and for patients referred by physicians from outpatient clinics or the community.

21. **End of Life Care for Patient in Hospital**

**Purpose**

To identify the emotional, psychological and spiritual/religious needs of such dying patients and their families.

**Scope**

Family members of patients who are at the end stage of life and unlikely to recover, e.g. brain dead patients.

**Responsibility**

Nurses, Doctors, Psychologists, Counselors

**Policy**

**Patient Centered Goals**

- Identify patients who require end of life care.
- Document all criteria and check lists for end of life care

**Family Centered Goals**

- The clinical team (Doctors, Nursing personnel, Counselors) must strengthen their own relationship with the patient’s loved ones by:
  - Facilitating ongoing communication among family members, and members of the care team.
  - Shared decision making between health team and patient/family have to be made and family’s consent documented in patient case sheet.
  - Supporting families, and caregivers including grief, and follow-up services.
Special Issues in Communicating with families near the time of death

- Arrangements for the last wishes of patients or request of family members
- Notification of Death.
- Organ Donation
- Paperwork & discharge formalities
Checklist

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<th>Psychological Insight</th>
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<td>1</td>
<td>Patients family aware of diagnosis</td>
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<td>Psychological support required</td>
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</tr>
<tr>
<td>2</td>
<td>Special needs at time of death and after identified</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Nurse’s Name………………………….Signature………………..Date…………Time…

CARE AFTER DEATH

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Goal</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Death Forms filled as per norms</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Procedures following death discussed or carried out:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Patient had infectious disease</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Patient has religious needs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Post mortem discussed</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Preservation of body / mortuary / hearse requirements checked</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Family/ Others given information on hospital procedures</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Informed to collect death certificate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Death summary</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Family request for Organ donation</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Hospital policy followed for patient’s valuable and belongings</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>If yes: Information for Organ bank provided</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□□□ Eye / Ear</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□□□ Kidney</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□□□ Heart</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□□ Pancreas/Liver</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>□□ Other</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Nurse’s Name………………………….Signature………………..Date…………Time…….
22. **Verbal Orders**

**Purpose:** To Define the guidelines for verbal orders

**Scope:** Pharmacy, Wards.

**Responsibility:** Physicians, Nurses, Pharmacist

**Policy:** Communication is the number one root cause of all reported sentinel events combined. Verbal orders are particularly error prone; the person giving the order has a tendency to assume the receiver has understood the meaning and intent of the order and has copied it down correctly. Even if the order is understood, transcription errors can still occur when the verbal order is written into the medical record or sent to the pharmacy.

Whenever possible, one should avoid using verbal orders, especially when the prescriber is present and the patient’s chart is available. Verbal orders certainly might seem faster and more convenient. The following are some ways you can streamline the written process:

- Consider e-mail as a quick way to communicate written orders, if Availability permits.
- Short text messaging via mobile may be other convenient method, after one has spoken over the phone.

It is not possible to eliminate verbal orders, especially during emergencies and surgeries, hence it, requires implementing a process for taking verbal or telephone orders that includes a verification “read-back” of the complete order by the person receiving the order.

- First, the medication order recipient should write down the medication order. Then he or she should repeat the name of the drug and dosage order to the prescriber and request or provide correct spelling, using aids such as “B as in ball.” All numbers should also be spelled out; for example, “16” should be stated as “one-six” to avoid confusion with the number 60.

- Avoid using abbreviations. For example, “1 tab tid” should be stated as “One tablet three times daily.”

- Whenever possible, have a second person listen to the verbal telephone order to verify the accuracy.

- Record a verbal order directly onto an order sheet in the patient’s chart, if possible.

- Write the medication’s purpose on the order (unless the prescriber considers disclosure inappropriate). The order should also include the drug name, dosage form, strength or concentration, frequency, route, quantity, and duration.

- Include on every order the patient’s name, age, and UHID, as well as the name of the prescriber, his or her telephone number when appropriate, and the name of the individual transmitting the order.
The person who receives the order should sign, put his/ her name, date, and note the time of the order.

If possible, the duty doctor/ nurse should receive verbal orders for medications directly and should transcribe them into the medical record.

Limit verbal medication orders to formulary drugs to avoid potential misunderstandings with less familiar drugs.

In certain areas, verbal orders should never be used because of the high potential for error. For example, chemotherapy drugs or any other high-risk or sound-alike names should not be prescribed verbally.

23. **High Risk Medication**

**Purpose:** To identify and list medications that may have an increased potential for error associated with them. Due to potential for error these drugs require special precautions at the time of ordering, transcribing, dispensing, administering and monitoring the medication.

**Scope:** The policy applies to all the clinical specialties, including ICU’s, Inpatient area and Outpatient Department.

**Responsibility:** Physician, Pharmacist, Nursing Staff

**Policy**

High risk medications are drugs that bear heightened risk of causing significant patient harm when they are used in error. Consequences of an error with these medications are clearly devastating to patients. Procedure for administration of high risk medication

1. Whenever these medications are prescribed the nurse will take special note of these.
2. The dosage prescribed will be checked
3. If the dosage is outside the normal range then the dosage will be confirmed with the consultant before preparing setting up the medication.
4. The ampoules or vials as the case may be will be taken in consonance with the dose.
5. These will be kept separately and verified for:
   a. The pharmacological name & date of expiry
   b. Concentration and amount of chemical in each ampoule / vial
   c. Sum of total doses if more then one ampoule/ vial is used
   d. Route of medication, i.e. IM/ IV / sub cutaneous and whether this corresponds to the consultants orders.
6. The above will be verified by another nurse prior to loading the medicine
7. These drugs will then be administered at the rate and by the route advised.
8. Infusion of high risk medication will be clearly labeled and concentration of the drug per ml will also be mentioned in the label.

9. The high risk medication will be kept in such a way that it is accessible to authorized personnel only. Proper accounting of these drugs will be maintained. A list of high risk medication is attached.

List of High Risk Medication

a. Inj adenosine
b. Inj adrenaline
c. Injaminophyllin
d. Inj atropine
e. Injatracurium
f. Injbetaloc
g. Injbetalopase
h. Inj calcium gluconate
i. Inj calcium citrate
j. Injcordarone/ Amiodorore
k. Inj diazepam
l. Inj digoxin
m. Inj dopamine
n. Inj dobutamine
o. Inj ephedrine
p. Injepsolin
q. Inj fentanyl
r. Inj heparin (regular)
s. Inj heparin (low molecular weight)
t. Inj insulin
u. Injisoprenaline
v. Injisoptin
w. Inj magnesium sulphate
x. Inj morphine
y. Inj midazolam
z. Inj nitroglycerine
aa. Inj noradrenaline
bb. Injpenthedine
c. Injphenobarbitone
dd. Inj potassium chloride
ee. Injpropofol
ff. Injsopran
gg. Inj streptokinase
hh. Inj sodium valporate
ii. Injthiopentone
jj. Injvecuronium
kk. Injxylocard
ll. Antimalignancy
24. Medication Administration

**Purpose:** To maintain proper and right medication administration

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Steps</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Inform the patient about the prescription</td>
<td>Staff Nurse</td>
</tr>
<tr>
<td>2</td>
<td>Medicine should be provided as per doctor’s advice.</td>
<td>Staff Nurse</td>
</tr>
<tr>
<td>3</td>
<td>Keep these five ‘R’ in mind before giving medicine.</td>
<td>Staff Nurse</td>
</tr>
<tr>
<td></td>
<td>1) Right Patient</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2) Right dose</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3) Right Route</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4) Right time</td>
<td></td>
</tr>
<tr>
<td></td>
<td>5) Right Medicine</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Inspect for Expiry date before giving medicine</td>
<td>Staff Nurse</td>
</tr>
<tr>
<td>5</td>
<td>According to doctor’s orders drug should be given via IM, IV, S/c</td>
<td>Staff Nurse</td>
</tr>
<tr>
<td>6</td>
<td>If the medicine is to be provided through point, then patient’s Name,</td>
<td>Staff Nurse</td>
</tr>
<tr>
<td></td>
<td>Reg. No., Ward, Date, Name of injection dosage etc should be labeled</td>
<td></td>
</tr>
<tr>
<td></td>
<td>on point /bottle.</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Doctor should be informed in case the patient refuses to take medicine</td>
<td>Staff Nurse</td>
</tr>
<tr>
<td></td>
<td>or has got any reaction after taking medicine</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>If any adverse drug reaction occurs, inform the Doctor / RMO</td>
<td>Staff Nurse / Doctor</td>
</tr>
<tr>
<td></td>
<td>immediately and follow the “MANAGEMENT OF ADVERSE DRUG EVENT process”</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>Sterile/Aseptic technique should be used while giving medicines</td>
<td>Staff Nurse</td>
</tr>
<tr>
<td></td>
<td>through parenteral route.</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Record all the medication administered to the patient in IP case paper</td>
<td>Staff Nurse</td>
</tr>
</tbody>
</table>
25. **Adverse Drug Events**

**Purpose**
To provide a mechanism for identifying, reporting, and monitoring adverse drug events (ADEs).

**Scope**
This policy applies to medication therapy for all patients cared for in the hospital. Anyone who provides patient care at the hospital can report an Adverse Drug Event

**Definitions**
What is a reportable Adverse Drug Event (ADE)?
- Adverse Drug Event includes all medication errors and adverse drug reactions.
- A Medication Error is any preventable event that may cause or lead to inappropriate medication use or patient harm.
- A Reportable Adverse Drug Reaction (ADR) is an unintended drug reaction that:
  - Prolongs hospital stay
  - Results in admission or an Emergency Department visit
  - Causes the postponement or cancellation of surgery
  - Is unlabeled or rarely seen
  - Results in death or permanent disability
  - Is potentially life-threatening.
- Also reportable:
  - Known reactions that present in unexpected or unusual ways also are reportable.
  - Potential Adverse Drug Event (PADE) or Near miss- a hazardous situation that could lead to an error.

**Procedures And Responsibilities**

1. **Identifying an ADE**
   a. Staff who suspect an ADE notify prescriber and resident doctor immediately if the event is significant or may alter the patient's plan of care.
   b. Assess the patient.
   c. Implement adjustments in patient's treatment as ordered.
   d. Document the description of the ADE in incident form, categorize subsequently monitor in the progress record.

2. **Reporting an ADE**
   a. Staff completes the Incident reporting form immediately or not later than
   b. 24 hours of the ADE identification.
c. Forms are sent, confidentially to the Manager Quality, either as hard copy or via email.
d. Security of Information: No copies are made of the incident forms.
e. Reports to include:
   i. Describe the error or preventable adverse drug reaction. What went wrong?
   ii. Was this an actual medication accident (reached the patient) or are you expressing concern about a potential error or writing about an error that was discovered before it reached the patient?
   iii. Patient outcome.
   iv. Where in hospital did this occur.
   v. Generic name of all products involved;
   vi. Brand name of all products involved.
   vii. Dosage form, concentration or strength, etc.
   viii. Where error was based on communication problem, is a sample of the order available? Are samples or pictures available if requested?
   ix. Please state your recommendations for error prevention.
   x. Please include the name and contact info of Sister Incharge.

3. Reviewing ADEs

   a. Supervisor/manager completes timely evaluation of the circumstances surrounding the event.
   b. Root cause analysis
   c. In the case of significant ADE's or medication-related sentinel events, reviewers inform Admin.department to MS/Dy.MS, as well as compliance with sentinel event policy.
   d. ADE reports are categorized by: location, severity, product information and therapeutic classification, type, causes and contributing factors.
   e. ADR's are further evaluated to determine:
   f. Appropriateness of medication for patient's condition
   g. Any contraindications to medication
   h. Appropriate documentation of Allergies
   i. Appropriate management and monitoring of ADR
   j. The Drug Committee reviews the monthly report, significant events, results of root cause analysis and makes recommendations for improvements to the medication use process.

Exceptions

Adverse reactions that occur following the administration of investigational drugs are reported according to the specific protocol for that drug by contacting the principle investigator.
## Categories of Adverse Drug Events:

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category A</td>
<td>An error occurred that may have the capacity to cause error</td>
<td>No Error</td>
</tr>
<tr>
<td>Category B</td>
<td>An Error occurred but the error did not reach the patient</td>
<td>Error, but No Harm</td>
</tr>
<tr>
<td>Category C</td>
<td>An Error occurred that reached the patient but did not cause patient harm</td>
<td>Error, but No Harm</td>
</tr>
<tr>
<td>Category D</td>
<td>An error occurred that reached the patient and required monitoring to confirm that it resulted in no harm to the patient and / or required intervention to preclude harm</td>
<td>Error, but No Harm</td>
</tr>
<tr>
<td>Category E</td>
<td>An Error occurred that may have contributed to or resulted in temporary harm to the patient and required intervention</td>
<td>Error + Harm</td>
</tr>
<tr>
<td>Category F</td>
<td>An error occurred that may have contributed to or resulted in temporary harm to the patient and required initial or prolonged hospitalization</td>
<td>Error + Harm</td>
</tr>
<tr>
<td>Category G</td>
<td>An error occurred that may have contributed to or resulted in permanent patient harm</td>
<td>Error + Harm</td>
</tr>
<tr>
<td>Category H</td>
<td>An error occurred that required intervention necessary to sustain life</td>
<td>Error + Harm</td>
</tr>
<tr>
<td>Category I</td>
<td>An error occurred that may have contributed to or resulted in the patient’s death</td>
<td>Error + Death</td>
</tr>
</tbody>
</table>
26. **Chemotherapy**

**Purpose:** To Develop guidelines for administration of Chemotherapy

**Scope:** Physician, Nursing

**Policy:**

- **Purpose**
  
  Antineoplastics (Chemotherapy) drugs are known to be carcinogenic, teratogenic or mutagenic. Their toxicity dictates that exposure of the drug to medical personnel handling the drug be minimal. Since many are also Injectables, aseptic conditions must be maintained during compounding.

- **Personal Protective equipment:**
  
  - Disposable non-latex gloves shall be worn for all procedures involving antineoplastic drugs. Double gloving is recommended when cleaning up spills.
  
  - Disposable gowns shall be worn for all procedures.
  
  - All potentially contaminated garments or gloves SHALL NOT be worn outside the work area.
  
  - Goggles and masks shall also be made available for use by employees that perform chemotherapy admixtures.

- **Admixing Procedure**
  
  - Hands shall be washed thoroughly before and after gloving.
  
  - Care shall be taken to avoid puncturing of gloves.
  
  - Luer-lock syringes and IV sets shall be used for all admixtures.
  
  - A plastic-backed absorbent drape shall be placed on work counter during the mixing of antineoplastics agents. The drape shall be exchanged whenever substantial spillage occurs or at the end of each production sequence.
  
  - Vials shall be vented to reduce pressure or eliminate vacuum.
  
  - A sterile gauze swab shall be wrapped around the neck of an ampule while opening. Care shall be taken to make sure that no drug remains in the neck of the ampule.

The final drug measurement shall be performed before removing the needle from the stopper of the vial or the syringe from the chemo-dispensing pin.
- All ampules and vials with excess drug left in them shall be discarded in the yellow plastic bag and labeled appropriately.
- Personnel shall refrain from applying cosmetics in the work area. These cosmetics may provide a source of prolonged exposure contaminated.
- Eating, drinking, chewing of gum, storage of food or smoking in, around or near the preparation area shall be prohibited. Each of these are sources of ingestion if they are accidentally contaminated by hazardous products.
- The nurse manager shall be contacted if a major spill occurs.

**Disposal**

a. All disposable items that have potentially come in contact with antineoplastic drugs during compounding shall be discarded in specifically designated containers. Each container shall have a "cytotoxic" label affixed to it.

b. All items used in compounding (excluding partial filled ampules and vials, and needles) shall be placed in a plastic bag and sealed before removal from the preparation area. This bag shall then placed in a contaminated waste box outside the hood. This contaminated waste box shall have a "Caution--Chemotherapy" label affixed to it.

**Order Processing**

a. All Consultant orders shall be sent to the pharmacy at least one hour in advance of the anticipated administration time.

**Acute Exposure**

a. Overtly contaminated gloves or outer garments shall be removed and replaced immediately after an exposure.

b. Hands shall be washed after removing gloves. Gloves shall not be used a substitute for hand washing.

c. In case of skin contact with a cytotoxic drug product, the affected area shall be washed thoroughly with soap and water as soon as possible. Refer to professional medical attention as soon as possible.

d. For eye exposure, flush affected eye with copious amounts of water. Refer to medical attention immediately.
e. Acute exposure episodes shall be documented. The exposed employee shall be referred for medical examination.

f. Should a spill occur, follow standard procedures for cleanup of the spill.
27. **Patient and Family Rights and Responsibilities**

**Purpose:**
Hospital has defined the following patient and family rights and responsibilities intended to:

a. Provide care appropriate to patient needs and consistent with the capacity and scope of organizations mission and services.

b. Provide considerate, respectful care at all times and under all circumstances, with

c. Recognition of their personal dignity and autonomy.

d. Provide care that is regardless of race, gender, ethnicity, religious beliefs or age.

**Scope:**
All patients and families that are provided care at Hospital

**Responsibility:**
All staff members of the Hospital in all Departments

**Patient Rights**

**Health Care:**
The right to quality care and treatment consistent with available resources and generally accepted standards. The patient has the right to participate in planning medical treatment including the right to refuse treatment to the extent permitted by law and government regulations and to be informed of the consequences of his/her actions.

**Respectful Treatment:**
The right to considerate and respectful care, with recognition of personal dignity and the right to express spiritual and cultural beliefs provided they do not interfere with others privacy and hospital operations. These Psychosocial, Cultural and Spiritual Values will be given the required consideration by the hospital.

**Privacy:**
The right to privacy during treatment/ care/ examination.

**Confidentiality:**
The right of the patient to confidentiality will be honored, within the limits of the law.

This includes:

- Patient’s location, identity and medical record and apply to the sharing of information within the hospital and with outside sources.

- The right to expect all communications and records pertaining to his/her health care be treated as confidential.

- His/her written permission shall be obtained before his/her medical records can be made available to anyone not directly concerned with his/her care.
Explanation of Care:

- Patient and families have a right to information and education about their healthcare needs. This includes:
  - Knowledge of the name of the physician who has primary responsibility for coordinating his/her care.
  - Receive an explanation from a committed and trained staff member in plain language of the diagnosis, treatment, procedures, and anticipated outcomes of care.
  - Except in emergencies, this information shall include a description of the procedure or treatment, the medically significant risks involved in this treatment, alternate course of treatment or non-treatment and the risks involved in each, and to know the name of the person who will carry out the procedure or treatment.
  - Patients and their families have a right to be informed by a committed and trained staff member of unanticipated outcomes of care and events. When it is not possible or medically advisable to give such information to the patient, it will be provided to family members or another appropriate person.
  - As and when appropriate, patients and families have a right to be educated about the medications, diet, prevention and other aspects of the disease process.
  - Be informed about transfers to another facility or organization and be provided complete explanation including alternatives to a transfer.

Self Determination:
The patient has a right to Participate actively in decisions regarding his/her medical care. Should the patient be unable to make these decisions, the patient may appoint a family member to make such decisions. This includes:
- To the extent permitted by law, the right to refuse treatment. Patient can leave against the medical advice (LAMA) of his/her physician after completing the consent for discharge against medical advice.
- Request a second opinion about their diagnosis or treatment plan or to change physicians during the course of their illness.

Costs:
- Patient / families have a right to the tariff list and to receive counseling regarding the estimated cost of treatment, payment schedule for the services provided by the hospital at the time of admission as well as time to time as required.
- Patient/ family will be informed about the financial implications when there is a change in the patient condition or treatment setting.
- Examine and receive an explanation of his/her bill regardless of source of payment.

Informed Consent:
Receive as much information about the illness and the proposed treatment or procedure as he/she may need in order to give documented informed consent or refuse the course of treatment or
procedure. This will include but not be limited to informed consent before anesthesia, blood and blood product transfusions and any invasive / high risk procedures / treatment.

**Medical Records:**

The right to have patients' electronic/ written medical record available on request.

**Safe and Secure Environment:**

The right to care and treatment in a safe and secure environment.

**Hospital rules and Regulations:**

The right to be informed of the facility's rules and regulations relating to patient or visitor conduct. This includes no smoking rules, and that compliance with those rules is expected from all individuals.

**Concerns, Complaints or Grievances:**

Patients and their family members have a right to register a complaint or grievance regarding services or quality of care received. They have a right to be informed about the hospital's policies and procedures for the initiation, review, and resolution of patient complaints.

**Freedom from Abuse:**

Patients have a right to be free from mental, physical, sexual and verbal abuse, neglect and exploitation from physician, staff, visitors, other patients or family members.

**Ethical Consideration:**

Conflicts of values, principles or interest in the clinical setting will be resolved through the collaboration of the professional staff and the patient, and when appropriate, the patient’s family or other representative.

**Patient Responsibilities**

**Provision of Information:**

The patient and /or family has the responsibility to provide to the best of his/her knowledge and ability, accurate and complete information concerning his/her present complaints, past medical history, hospitalizations, all medications (including herbal and over the counter),and other matters relating to his/her health.
Following Instructions:

The Patient and/or the family is responsible for following the treatment plan mutually agreed upon by the patient, the physicians and other clinicians involved in the patient’s care. The patient has the responsibility to express any concerns they have in their ability to follow the agreed upon with the proposed care or treatment.

Respect and Consideration:

The Patient and/or family is responsible for the following:
- Be considerate of the rights of other patients and hospital personnel.
- Treat those providing care with dignity and respect.
- Being respectful of the property and privacy of others and of the hospital.
- Never hurting or threatening another patient, family member or member of staff, or conduct of any activity that will disrupt the work of the hospital.
- Not bringing any weapons into the hospital.
- Never bringing alcohol or unauthorized drugs into the hospital.
- Respecting that the hospital is a no smoking zone.
- Control noise, and the number of visitors.

Refusal of Treatment/Accepting Consequences:

The patient and/or family member is responsible for his/her actions and the outcomes of those actions if he/she refuses treatment or does not follow the agreed.

Hospital Rules and Regulations:

The patient is responsible for following the rules and regulations affecting patient care and conduct.

Financial Obligations:

The patient is responsible for assuring that the financial obligations of his/her care are fulfilled as promptly as possible.

Personal belongings:

Understand that the hospital is not responsible for the personal property or for valuables kept on the person, unless they are received and stored for the patient by hospital personnel.
28. **Informed Consent**

**Purpose:** To assure that patient and family participate in his / her healthcare decisions.

**Scope:** Hospital wide

**Distribution list:** All Departments

**Policy:**

1. **Definitions**
   a. Voluntary Informed Consent - A patient’s consent is informed: When the patient has been given sufficient information so that he / she understands the nature of his / her condition, the nature and purpose of the proposed treatment, the risks and consequences of the procedure or treatment, the feasible alternative procedure or treatment and the prognosis if the procedure is not performed nor any treatment given
   b. General Consent - When the nature and probable risks of the procedure or treatment are of such a common and ordinary nature so as to be within the patient’s understanding and knowledge (e.g. injections, etc.)
   c. Implied Consent in a Medical Emergency - Consent in emergencies may be implied if the condition of the patient precludes his/her ability to make a decision regarding treatment or procedures. A medical emergency is a situation where delay for the purposes of obtaining consent may reasonably be anticipated as endangering the life of the patient or significantly increasing the harm to the patient’s health.
   d. Surrogate Decision Maker - The priority order of surrogate decision makers is: spouse, adult children, parents, adult brothers or sisters, adult grandchildren, significant other (close friend). A close friend may sign the consent form only in an emergency.

2. **Policy guidelines**
   a. General Guidelines
      Written “informed consent” using the relevant Consent Form shall be obtained in the following instances:
      i. All procedures performed in the Operating Theatres / Delivery Rooms.
      ii. Non-routine diagnostic or therapeutic procedures performed in the hospital, and not having a specific consent form. Example:
         - All angiographic procedures
         - Any procedure under any form of anesthesia
         - Aspiration cytology
         - Biopsy
         - Bone marrow aspiration / biopsy Catheterization of major vessels
         - Lumbar puncture
         - Endoscopy of GI or respiratory tract
         - Myelography and other invasive radiological procedures
         - Pacemaker insertion
• Paracentesis
• Thoracocentesis
• Dialysis
• Cardiac stress tests
• Radiotherapy
• Chemotherapy
• Blood transfusion
• CT Contrast Studies

b. Specific Guidelines
i. The primary treating Consultant shall discuss in lay terms the procedure, its risks, benefits and alternatives with the patient or the patient’s surrogate decision maker. The Consultant shall document the discussion by obtaining the patient’s or his surrogate decision maker’s written informed consent on the appropriate form.

ii. The patient shall sign the consent form. A surrogate decision maker may sign the consent on behalf of the patient if:
• The patient is a minor (less than 18 years of age)
• The patient desires the surrogate to sign on his/her behalf.
• The patient is mentally incapable of making an informed consent. The patient is mentally incapacitated
• The patient is unconscious
• The patient has received sedation within 3 hours
• The patient is physically incapable of signing the form

iii. The order of preference of surrogate shall be as per the definition of “surrogate decision maker” but may be modified as per the patient wishes or availability of the surrogate.

iv. In a life-threatening emergency where the patient is unconscious or unaccompanied, consent shall be implied; therefore the patient’s signature is not required. In such situations, the Consultant shall document in the patient’s medical record both the nature of the emergency and the inability of the patient or surrogate decision maker to consent.

vi. It is the responsibility of the person obtaining the consent to ensure that the consent form shall be properly filled prior to signing.

vi. All entries shall be in ink.

vii. Any available adult who shall be identified on the form by title or relationship to the patient shall be witness to the patient’s signature or the signature of the surrogate decision maker.

viii. The date and time of signing shall be clearly indicated.

ix. The consent form must be signed by the Consultant,
Anesthesiologist, patient or his decision maker and the witness prior to entry into the surgical or delivery suite and before any pre-medication and at least three hours after the administration of sedatives.

x. The consent form shall be valid for thirty (30) days from the date of signature by the patient or his surrogate decision maker.

xi. If the Consultant or the anesthetist’s signature is not on the consent form, the procedure shall be postponed or cancelled.

xii. The decision regarding the patient’s ability to make an informed consent shall be the responsibility of the Consultant.

xiii. A patient or the surrogate decision maker may revoke the consent for the procedure at any time before it is carried out. In such an event, the Consultant shall discuss the procedure again and if the patient or the decision maker still wishes to revoke the consent, then the procedure shall not be carried out. The patient or decision maker shall sign a note to the effect on the signed consent form. The Consultant shall document this in the progress notes.

c. Associated documents:

i. General informed consent on admission
ii. Consent for dental procedures
iii. Informed consent for anesthesia and surgery
iv. Informed consent for HIV testing
v. Informed consent for blood transfusions
vi. Authorization for medical and / or surgical treatment and / or procedure
vii. High risk consent form
viii. Consent for chemotherapy
### Permissible Abbreviations and Symbols

**Scope:** Nursing  
**Distribution list:** Nursing  
**Policy:**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRN</td>
<td>When necessary/as required</td>
</tr>
<tr>
<td>STAT</td>
<td>Immediately</td>
</tr>
<tr>
<td>OD</td>
<td>Everyday/Once a day</td>
</tr>
<tr>
<td>BD/BID</td>
<td>Twice a day</td>
</tr>
<tr>
<td>TDS/TID</td>
<td>Three times a day</td>
</tr>
<tr>
<td>QDS/QID</td>
<td>Four times a day</td>
</tr>
<tr>
<td>XH</td>
<td>X hourly</td>
</tr>
<tr>
<td>Supp</td>
<td>Suppository</td>
</tr>
<tr>
<td>Tab</td>
<td>Tablet</td>
</tr>
<tr>
<td>Syr</td>
<td>Syrup</td>
</tr>
<tr>
<td>Susp</td>
<td>Suspension</td>
</tr>
<tr>
<td>Cap</td>
<td>Capsule</td>
</tr>
<tr>
<td>Amp</td>
<td>Ampoule</td>
</tr>
<tr>
<td>Elix</td>
<td>Elixer</td>
</tr>
<tr>
<td>Pess</td>
<td>Pessary</td>
</tr>
<tr>
<td>Lot</td>
<td>Lotion</td>
</tr>
<tr>
<td>Cm</td>
<td>Cream</td>
</tr>
<tr>
<td>Oint</td>
<td>Ointment</td>
</tr>
<tr>
<td>Guttae</td>
<td>Eye Drops</td>
</tr>
<tr>
<td>Garg</td>
<td>Gargle</td>
</tr>
<tr>
<td>Tsp</td>
<td>Teaspoon</td>
</tr>
<tr>
<td>Tbp</td>
<td>Tablespoon</td>
</tr>
<tr>
<td>Cpd</td>
<td>Compound</td>
</tr>
<tr>
<td>Loz</td>
<td>Lozenges</td>
</tr>
<tr>
<td>Neb</td>
<td>Nebulisation</td>
</tr>
<tr>
<td>SC</td>
<td>Subcutaneously</td>
</tr>
<tr>
<td>IM</td>
<td>Intramuscular</td>
</tr>
<tr>
<td>IV</td>
<td>Intravenous</td>
</tr>
<tr>
<td>P.V</td>
<td>Per vaginally</td>
</tr>
<tr>
<td>P.R</td>
<td>Per rectally</td>
</tr>
<tr>
<td>I.D</td>
<td>Intradermal</td>
</tr>
</tbody>
</table>
OCCUPATIONAL HAZARDS AND HIERARCHY OF CONTROLS

Nursing Staff is exposed to following occupational health hazards:-

1. **Infectious or biological hazards:**
   i. Blood borne infections like HIV infection, Hepatitis B, Hepatitis C.
   ii. Air borne infections like tuberculosis, Chickenpox, Measles, Rubella,
   iii. Enteric infections like Hepatitis A, Salmonella gastroenteritis, diarrhea.

2. **Chemical hazards due to disinfectants and sterilants:**
   Use of chlorhexidine in hand washing preparations has been reported to cause birth defects in children when used by pregnant mothers (especially with non-intact skin).

**Administrative Controls And Policies:**

1. Vaccination for Hepatitis B is mandatory for all new appointments if it has not been done earlier.
2. All staff is oriented and educated regarding occupational hazards and importance of vaccinations. Training is also done for Needle Stick (vide policy No., CQI 3g,HRM 4) barrier nursing, standard precautions (vide policy no. NABH/HIC 2c/Standard Precautions/Ver. no. 1), Spill Policy (vide policy no.) and Biomedical waste management policy (vide policy no. NABH/HIC 8/Bio-Medical waste management/Ver. no. 1).

**Departmental Indicator :-**

<table>
<thead>
<tr>
<th>1</th>
<th>Percentage of Medication errors</th>
<th>Expansion</th>
<th>Data Generation</th>
<th>Calculation for a month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerator</td>
<td>Total number of medication errors in a month (x)</td>
<td>Medication errors reported from any of the patient care area by a health care worker in a month</td>
<td>For IP, medication errors are reported in incident report by staff nurses</td>
<td>x --------- * 100=H</td>
</tr>
<tr>
<td>Denominator</td>
<td>Total number of discharges and deaths in that month (a+b)</td>
<td>Total Discharges+ Total Death</td>
<td>From MRD</td>
<td>a + b</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2</th>
<th>Percentage of transfusion reactions</th>
<th>Expansion</th>
<th>Data Generation</th>
<th>Calculation for a month</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Symptomatic Urinary tract infection rate (SUTI)</strong></td>
<td><strong>Expansion</strong></td>
<td><strong>Data Generation</strong></td>
<td><strong>Calculation for a month</strong></td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>--------------</td>
<td>---------------------</td>
<td>-----------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Numerator</strong></td>
<td>Number of urinary catheter associated UTIs in a month (a)</td>
<td>microbiology report generated based on the nosocomial surveillance form, infection rate can be captured</td>
<td>( \frac{a}{1000} = H )</td>
<td></td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
<td>Number of urinary catheter days in that month (b)</td>
<td>it can be captured from the infection control surveillance form daily filled by the ICUs</td>
<td>( \frac{b}{1000} = H )</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Ventilator associated pneumonias (VAP)</strong></th>
<th><strong>Expansion</strong></th>
<th><strong>Data Generation</strong></th>
<th><strong>Calculation for a month</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
<td>Number of ventilator associated pneumonias in a month (a)</td>
<td>Signs &amp; symptoms developed for the central line patient can be capture through surveillance form and confirm whether it will come under VAP (only take data intubation after 48hrs)</td>
<td>( \frac{a}{1000} = H )</td>
</tr>
<tr>
<td><strong>Denominator</strong></td>
<td>Number of ventilator days in that month (b)</td>
<td>it can be captured from the infection control surveillance form daily filled by the ICUs</td>
<td>( \frac{b}{1000} = H )</td>
</tr>
</tbody>
</table>
### Central Line Associated Blood Stream Infection (CLABSI)

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of central line associated blood stream infections in a month (a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Number of central line days in that month (b)</td>
</tr>
</tbody>
</table>

**Expansion**

- Signs & symptoms developed for the central line patient can be captured through surveillance form and those whose blood culture report is positive will be counted as No. of CLABSI.

**Data Generation**

- it can be captured from the infection control surveillance form daily filled by the ICUs.

**Calculation for a month**

\[
\text{Numerator} \div \text{Denominator} \times 1000 = H
\]

### Surgical site infection rate*

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of surgical site infections in a given month (a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Number of surgeries performed in that month (b)</td>
</tr>
</tbody>
</table>

**Expansion**

- Clean Surgery - within one month after surgery
- Replacement surgery - within one year after surgery

(Data can be captured by using the surveillance form)

**Calculation for a month**

\[
\text{Numerator} \div \text{Denominator} \times 100 = H
\]

### Incidence of fall

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of falls in a given month (x)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Number of discharges and deaths in that month (x)</td>
</tr>
</tbody>
</table>

**Expansion**

- Patient fall reported from any of the patient care area by a health care worker in a month

Through Incident reporting form

**Calculation for a month**

\[
x \div (\text{Total Discharges} + \text{Total Death}) \times 100 = H
\]
### Incidence of bed sores after admission

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Denominator</th>
<th>Expansion</th>
<th>Data Generation</th>
<th>Calculation for a month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of patients who develop new /worsening of pressure ulcer in a given month (x)</td>
<td>Number of discharges and deaths in that month (a+b)</td>
<td>Bed sore reported from any of the patient care area by a health care worker in a month</td>
<td>Through Bed sore reporting form</td>
<td>( \frac{x}{a+b} \times 100 = H )</td>
</tr>
</tbody>
</table>

### Bed occupancy rate

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Denominator</th>
<th>Expansion</th>
<th>Data Generation</th>
<th>Calculation for a month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of inpatient days in a given month (a)</td>
<td>Number of available bed days in that month (b)</td>
<td>duration of a patient stay inside the hospital in days</td>
<td>From MRD/HIS</td>
<td>( \frac{a}{b} \times 100 )</td>
</tr>
</tbody>
</table>

### Average length of stay (combined and specialty wise)

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Denominator</th>
<th>Expansion</th>
<th>Data Generation</th>
<th>Calculation for a month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of inpatient days in a given month (x)</td>
<td>Number of discharges and deaths in that month (a+b)</td>
<td>duration of a patient stay inside the hospital in days</td>
<td>From MRD/HIS</td>
<td>( \frac{x}{a+b} = H )</td>
</tr>
</tbody>
</table>

### Incidence of needle stick injuries

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Expansion</th>
<th>Data Generation</th>
<th>Calculation for a month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numerator</td>
<td>Denominator</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------</td>
<td>-------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of parenteral exposures in a given month (a)</td>
<td>Number of inpatient days in that month (b)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Injury due to any sharp.</td>
<td>the number of calendar days in the month</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Reported cases From Infection Control</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[
a \times 100 = H/b
\]
References:


3. NANDA International (professional association of nurses), Glossary of Terms.


7. Rammanohar Lohia quality manual
