



# Orthopaedic

**Standard Operating Procedures  
For Medical Assistants in Orthopaedic**

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Ministry Of Health, Malaysia



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# FOREWORD

**S**tandard Operating Procedures for Medical Assistants in the Medical Care Programme serves as a guide to meet the standards of care and professionalism set out by the Ministry of Health of Malaysia (MOH). It also serves to enhance public awareness of standards expected from Medical Assistants (MAs) who provide specialized care for patients. Public awareness of standards expected from MAs will hopefully encourage greater compliance amongst

MAs themselves to these guidelines. It is in their best interest to adhere, at all times, to the Standard Operating Procedures laid in this book.

Of late, Medical Assistants have seen many positive changes initiated by the Medical Development and Practice Divisions of MOH as well as the Medical Assistant Board with full support from all senior consultants in MOH. The MOH recognizes the valuable contributions by MAs and have created several senior posts of Medical Assistants to enhance and improve the clinical supervision and management of patients. The Ministry of Health has always stressed on the importance of effective supervision of their peers by senior Medical Assistants, under the guidance of medical officers. The preparation of the Standard Operating Procedures and other guidelines are aimed at providing useful information for quality patient care and I hope these guidelines will be used as reference material for Medical Assistants throughout the country in the execution of their duties and efforts to provide quality health care to the community.

I am confident the Standard Operating Procedures will be well accepted. We will of course ensure that updates with new topics, activities and procedures will be introduced in future editions.

May I congratulate the Medical Programme of MOH, all senior consultants and the Medical Assistants Technical Committee for their tireless efforts and commitment to publish the Standard Operating Procedures. We would also like to record our thanks to all doctors and Medical Assistants involved in the successful preparation of this first edition of the Standard Operating Procedures. I am always impressed with efforts to strive for excellence in service delivery and such efforts by the MAs are most commendable indeed.

A handwritten signature in black ink, appearing to read 'Ismail Merican'.

**Tan Sri Datuk Dr. Hj. Mohd. Ismail Merican**

Director General of Health  
Ministry of Health, Malaysia  
July 2006



# FOREWORD

Successive generations of Medical Assistants who have worked in the Ministry of Health have all practiced the long-held tradition of hands-on training to ensure that everyone can acquire the latest knowledge and skills. While formal training has always been encouraged this is not always possible for some for various reasons. To their credit this form of knowledge and skill sharing has been done rather effectively. While practicing the skill which they acquired through training never posed any problem, the lack of documents which specify standard methods of carrying various tasks has been a cause of anxiety and concern to many. Thus the arrival of this document on the standard operating procedures for Orthopaedic medicine into the scene now should alleviate the anxiety of many.

The importance and relevance of this SOP Standard Operating Procedures for Orthopaedic medicine, which is long overdue, can never be overstated. This SOP will ensure uniformity/standardization, correctness/accuracy, effectiveness as well consistency in performance. Not all tasks require SOP as they are carried out routinely. SOPs can be considered as mandatory for tasks which are complicated. Tasks and procedures associated with the four above mentioned disciplines are certainly complicated.

SOP can easily be "linked" to quality assurance. Compliance to SOP would certainly ensure quality care for the patient. This is important as our patients now are increasingly well informed of their rights and they expect nothing less than the quality of care that they perceive they deserve. This SOP will not only be useful to those who are already familiar with the procedures but staff who are fairly new will find it very useful.

Writing this SOP, I am sure, has not been an easy task. It requires an certain depth of knowledge, team approach and the courage to decide on what should constitute standard methods. To the authors of this SOP we owe them deep gratitude for their effort, time and resilience. They must be congratulated for a job well done.

Thank you

A stylized handwritten signature in black ink, consisting of several loops and a long horizontal stroke at the bottom.

**Dato' Dr. Hj. Noorimi binti Hj. Morad**  
Director of Medical Development Division  
Ministry of Health, Malaysia





# MESSAGE

It is my great pleasure and honour to say a few words on this first edition Standard Operating Procedures for Medical Assistants in Orthopaedics. I would like to congratulate the Working Committee in the preparation and compilation of this issue.

These surgical procedures have existed since the beginning of Orthopaedic services in this country. This compilation reflects the proactive stance of its members, in their desire to put practice in writing.

The listed procedures are not exhaustive, but comprehensive and practical in its general application.

There is an ever increasing complexity in Orthopaedic surgical procedures. This reference compilation will be a guide to new and trainee paramedics, and also ensure greater uniformity in the practice. Not only will it enhance quality care and safety, it will also minimize errors and morbidities.

The meticulous and great effort invested in this publication is reflected in its systematic, simple and clear manner for easy reading and reference. Hence, I am confident that this book will be a useful guide in our daily work.

I would like to express my gratitude to the doctors and especially the medical assistants for coming forward in sharing their experiences and knowledge in this compilation. My sincere thanks to the Medical Practice Division and the Medical Development Division, Ministry of Health for their support and sponsorship and to all those involved in the publication of this book including those whose names are not mentioned unintentionally.

Thank you

**Dato' Dr. Muhd. Borhan Tan bin Abdullah,**  
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## THE EVOLVING OF MEDICAL ASSISTANTS

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The Medical Assistants evolved from "Dresser" during the Pre war times in then Malaya. Later the name was changed to Hospital Assistants in 1970 and in 1985, the name has designated as Medical Assistants. The leading roles and responsibilities of Medical Assistants can be considered as the backbone of the rural Government curative and preventive component of the health care services.

Their services were comparable as those of physician's assistant in the United States, nurse practitioner in Europe, the "Bare-foot Doctor" in China and then in Soviet Union the "Feldsher". Medical Assistants elsewhere perform the many tasks of physician. They were the main health care personnel which represent an alternative to physician centred health care both in outpatient and inpatient service.

The training of the dresser was conducted with lectures and supervised in his practical work through his routine duties from seasoned medical graduates.

After passing the Probationer to Grade III Examination, at the end of two years, these dressers were assigned to work as junior members of a team of more senior dressers in carrying out their professional duties. At the end of his four years, after passing the examination, he had to sit for his Grade III to Grade II Examination.

A Dresser with Grade II rank and status was then considered as "sufficiently competent" and experienced to handle surgical and medical problems in hospital.

He is competent to handle any emergencies and has practical experience in Midwifery. Dresser Grade II to Grade I, considered prestigious, were for the Senior Grade Dresser. The subjects were Medicine, Surgery, Materia Medica, Preventive Medicines and Midwifery.

In early Malaya, and now Malaysia, Dressers have been called different names. They were referred to as Apothecaries, Sub-Assistant Surgeon, Surgical Assistant, Hospital Assistants and now Medical Assistants.

Towards 1965, Crash-Program was started by recruiting youths of the Straits that had completed their School Certificate level examination to the Crash-Program to overcome the acute shortage of trained medical personnel.

In January 1971, the first Hospital Assistants School in Seremban commenced its training solely for Hospital Assistants in the country. Today Malaysia has four Medical Assistants colleges (Seremban, Alor Setar, Ipoh and Kuching). The curriculums are structured specifically to enable the Hospital Assistants to function in various

health settings with emphasis on the health promotions, prevention, rehabilitation, curative and health management skill. Candidates who passed their Sijil Pelajaran Malaysia, successfully gone through interview conducted by Public Service Commission are accepted into the three years Medical Assistants training programme.

Upon completion and having passed the final examination, they will be registered by the Medical Assistant Board and then be appointed by the Public Service Commission (Government) before they are posted to the various health care services in Malaysia. Those sponsored by respective agencies private entities will serve their employer.

The Act 180 of Hospital Assistants Act 1977 allows the establishment of Hospital Assistants (Registration) Board which supercede all matters related to the regulations and registration of Medical Assistants.

In 1993, the Medical Act 1971, Medical (Instrumental)(Exemption) Regulations 1986 was recommended for Enhancement to allow the Medical Assistants to use list of medical instruments such as stethoscope, laryngoscope, sphygmomanometer in the course of his duties.

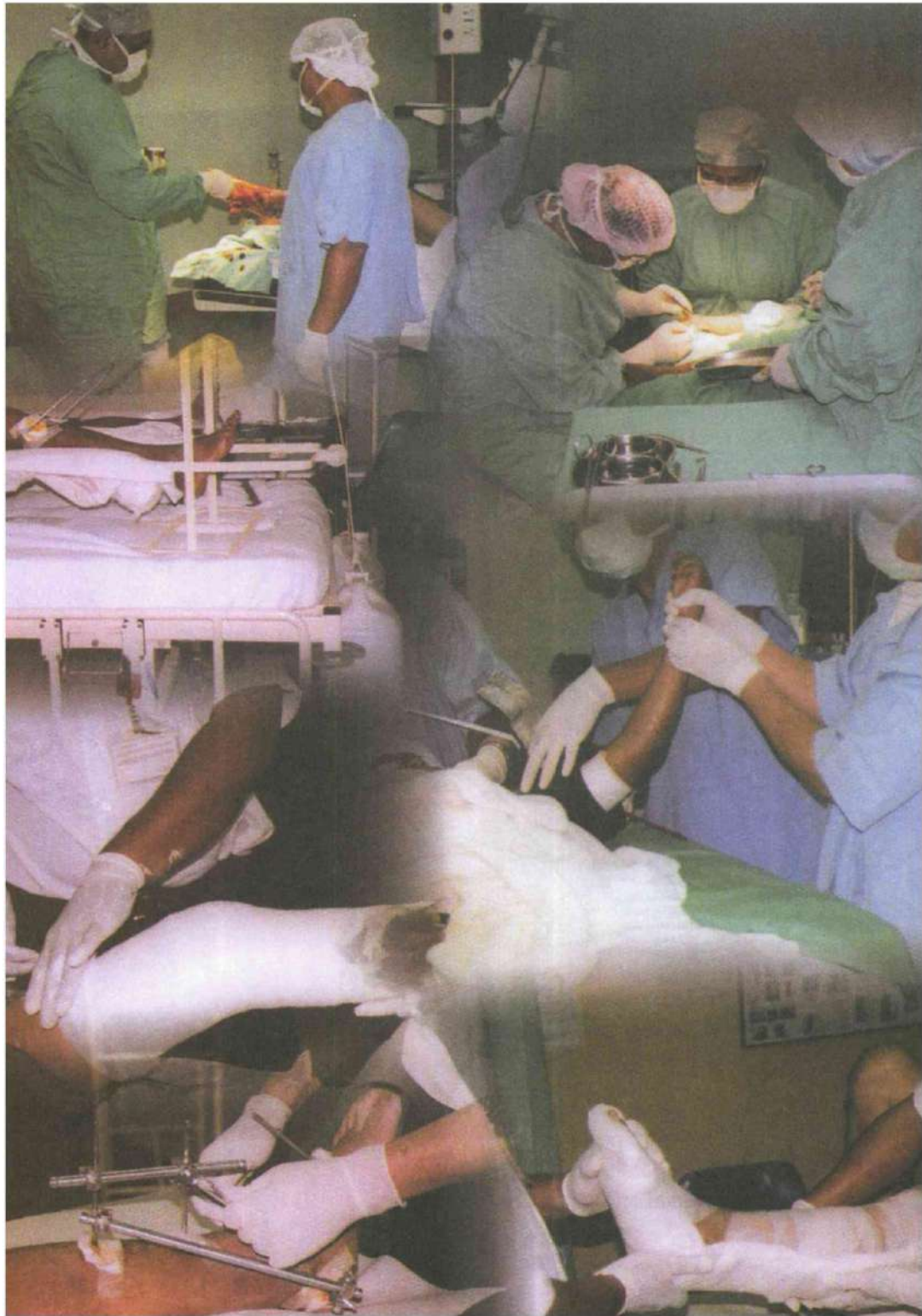
In 1992, the Certificate level was upgraded to a Diploma level due to the various new development and challenges in the health care demanding for a highly skilled and knowledge based health care profession.

Today, in an era of specialization, rapid technology and medical science development, the Medical Assistants role as complement and supplement are evolving with times so as to remain relevant, clients focus in this ever-fast changing health care scenario.

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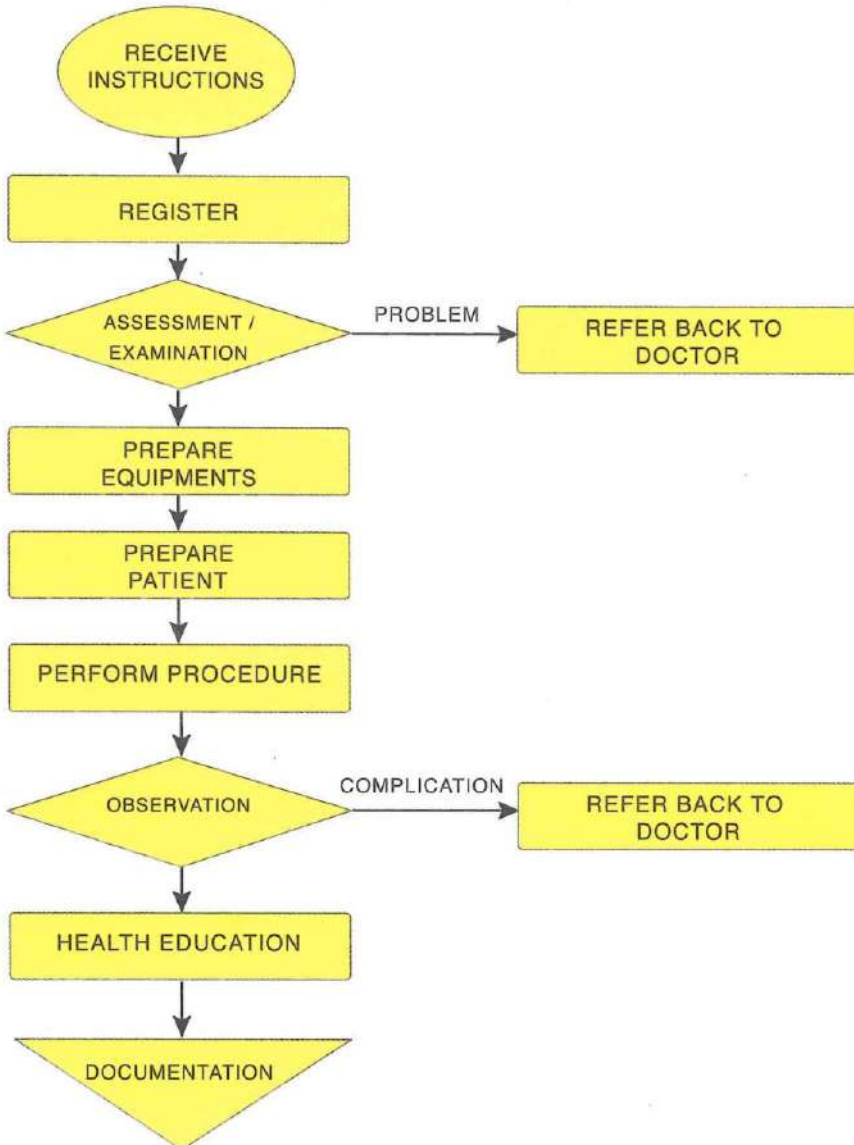






## 1. MANUAL MANIPULATION & REDUCTION OF CLOSE FRACTURES & DISLOCATIONS

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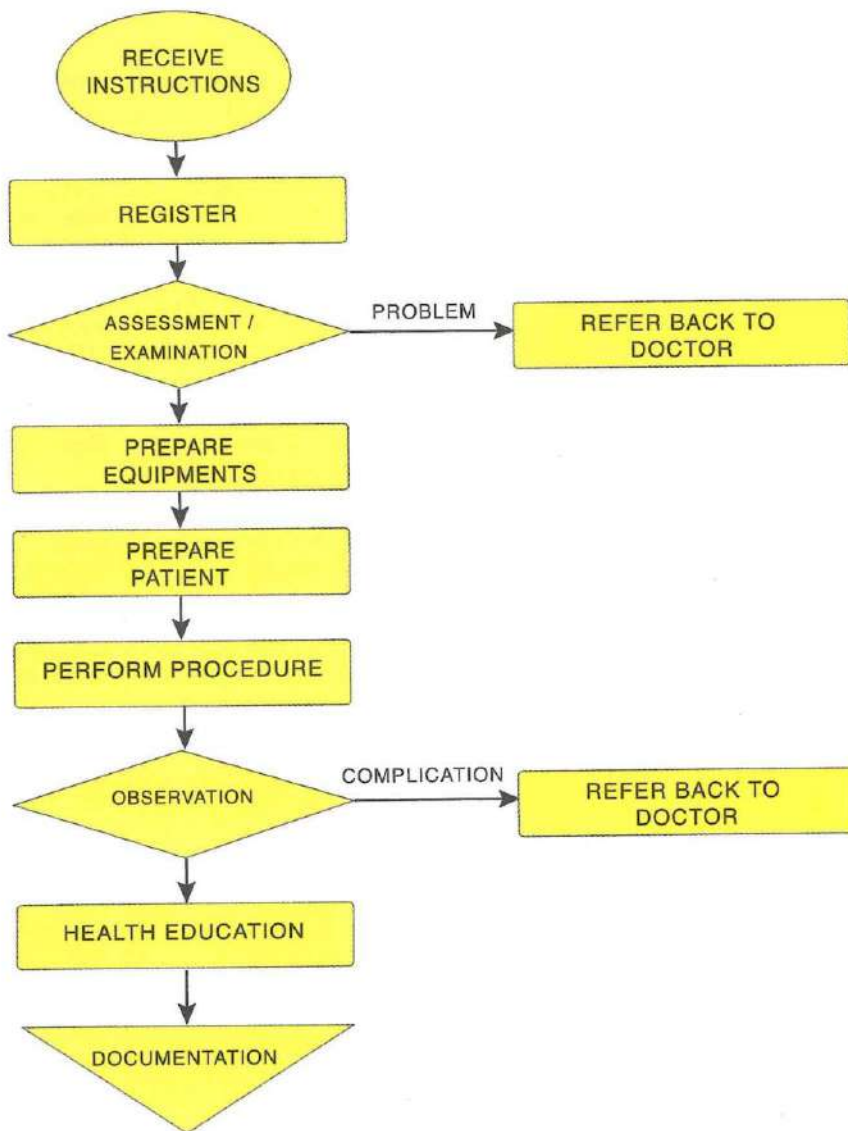


## 1. MANUAL MANIPULATION & REDUCTION OF CLOSE FRACTURES & DISLOCATIONS

Activity	Work Process	Standard	Requirement
1. Receive instructions	Read instruction.	Written instruction as given by doctor	BHT/ prescription slip.
2. Registration	Register patient.	Register patient particulars in the procedure registration book	Procedure registration book
3. Assessment/ Examination	1. Confirm fracture/ dislocation/site/side. 2. Assess deformity of the limb. 3. Check Condition of wound if any. 4. Check Circulation 5. Check Sensation & movement of the limb	Review X-Ray  Observe aseptic technique when necessary.	X-Ray – AP view – lateral
4. Prepare equipments	Prepare equipment, medication and lotions.	Prepare as required for the procedure.	POP Trolley Basin of Water Limb Support Cotton & Gauze Adhesive Plaster Dressing Set Syringes Sedation Spirit Swab Sofratulle Flavine Lotion Apron Arm sling Collar & cuff Splints
5. Prepare patient	1. Check correct patient 2. Explain to patient relative/parents the procedure to be carried out. 3. Check consent. 4. Confirm with patient the affected limb. 5. Place patient in a comfortable position. 6. Place linen protector under the injured limb.	Correct patient and site & side to be treats  At all time be courteous, kind and gentle  Valid consent	Consent form Linen

Activity	Work Process	Standard	Requirement
6. Perform Procedure	<ol style="list-style-type: none"> <li>1. Give sedation</li> <li>2. With the help of an assistant hold the affected limb carefully.</li> <li>3. Manipulate fracture/dislocation.</li> <li>4. Dress and bandage the wound if any.</li> <li>5. Apply POP/Splint/Slab/Strapping</li> <li>6. Clean the affected limb</li> <li>7. Mark window if necessary.</li> <li>8. Check X-ray (post reduction).</li> </ol>	<p>Sedation to be given Intra Venous by Doctor. Wait until patient is fully sedated.</p> <p>Apply POP according to PANDUAN PRAKTIKAL PEMASANGAN PLASTER KAST (KKM).</p> <p>Acceptable position (post reduction).</p>	<p>Pop Trolley Basin of Water Limb Support cotton &amp; gauze</p> <p>Sedations Syringes Spirit Swab Tourniquet Gauze Adhesive plaster</p> <p>X-ray film (post reduction) - AP View - Lateral</p>
7. Observation	<ol style="list-style-type: none"> <li>1. Observe and record circulation.</li> <li>2. Refer to doctor if any complication arises.</li> </ol>	Observe circulation and sensation for at least an hour (out – patient ).	Circulation chart
8. Health Education	<ol style="list-style-type: none"> <li>1. Care of the wound if any.</li> <li>2. Encourage movement of extremities.</li> <li>3. Care of POP/Splint/Slab/Strapping</li> <li>4. Advise patient to return to Orthopaedic Out-patient Clinic /Emergency Department immediately if develops :               <ol style="list-style-type: none"> <li>4.1 swelling</li> <li>4.2 severe pain</li> <li>4.3 numbness</li> <li>4.4 change in color of extremities</li> <li>4.5 broken POP/Slab</li> <li>4.6 fever</li> <li>4.7 foul smell</li> </ol> </li> </ol>	<p>To observe aseptic technique.</p> <p>Advice slip must be given to the patient.</p>	<p>Sterile Dressing Set. Adhesive Plaster Scissors Advice slip.</p>
9.Documentation	<p>Record in the procedure book.</p> <p>Record in patient's BHT.</p> <p>Fill Billing Code.</p>	Entries to be legible, signed & dated.	<p>Procedure book</p> <p>Patient's BHT</p>

## 2. APPLICATION OF PLASTER CAST



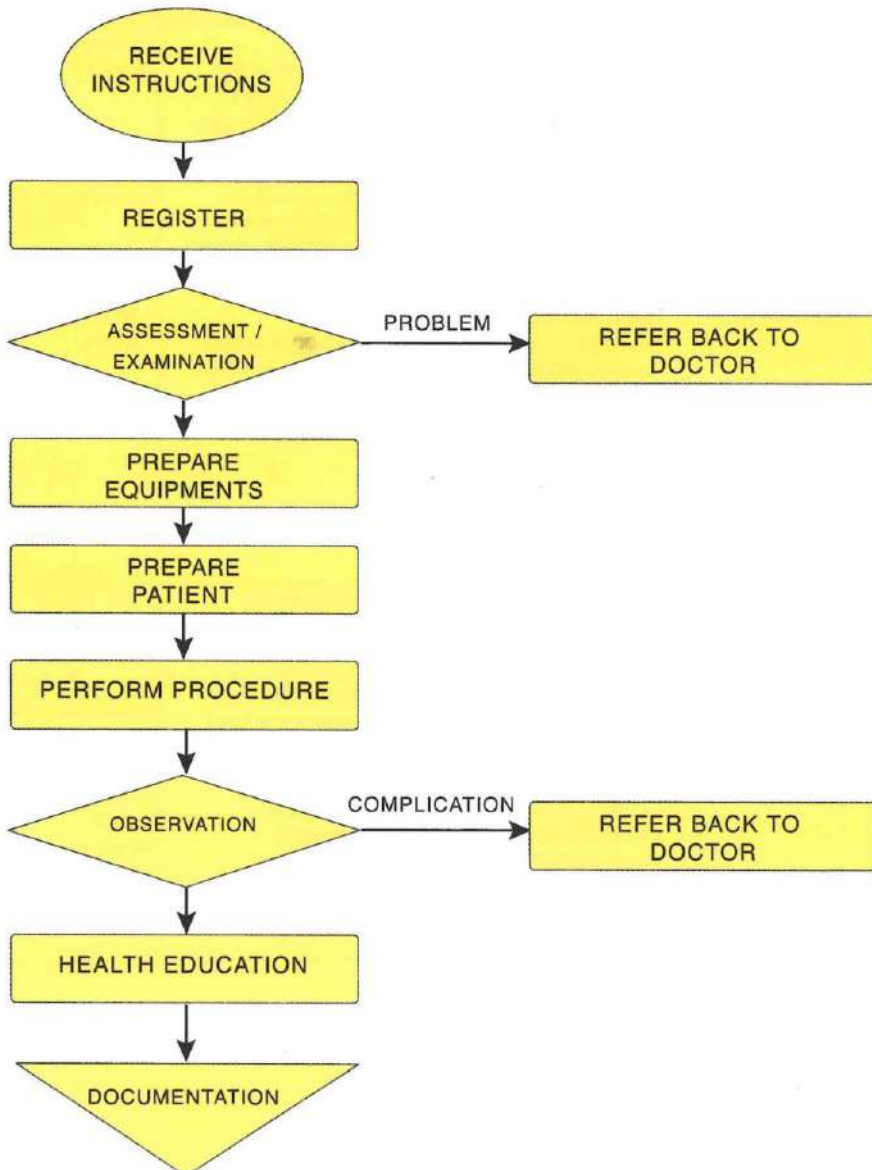
## 2. APPLICATION OF PLASTER CAST

Activity	Work Process	Standard	Requirement
1. Receive instructions	Read instruction.	Written instruction as given by doctor.	BHT/ prescription slip.
2. Registration	Register patient.	Register patient particulars in the procedure registration book.	Procedure Registration book
3. Assessment / examination	1. Confirm fracture/ dislocation/affected limb/ site & side 2. Assess deformity of the limb. 3. Check Condition of wounds if any. 4. Check Circulation 5. Check sensation & movement of the limb	Review X-ray     Observe aseptic technique when necessary.	X-ray - AP view - lateral
4. Prepare equipments	Prepare equipment/ medication / lotions.	Prepare as required for the procedure.	POP Trolley Basin of Water Limb Support Cotton & Gauze Adhesive Plaster Dressing Set Sedatives Sofratulle Flavine Lotion Apron Consent form Linen
5. Prepare patient	1. Check correct patient 2. Explain to patient/relatives/ parents the procedure to be carried out. 3. Check consent . 4. Confirm with patient's the affected limb. 5. Place patient in comfortable position. 6. Place linen protector under the injured limb.	Correct patient and site & side to be treats   At all times be courteous, kind and gentle.  Valid consent.	



Activity	Work Process	Standard	Requirement
6. Perform Procedure	<ol style="list-style-type: none"> <li>1. With the help of an assistant hold the affected limb carefully.</li> <li>2. Dress and bandage the wound if any.</li> <li>3. Apply Plaster Cast</li> <li>4. Mark window if necessary</li> <li>5. Check X-ray (post reduction).</li> </ol>	<p>Sedation to be given intravenous by a Doctor. Wait until patient is fully sedated.</p> <p>Observe aseptic technique when necessary</p> <p>Apply POP according to PANDUAN PRAKTIKAL PEMASANGAN PLASTER KAST (KKM)</p> <p>Acceptable position (post reduction)</p>	<p>POP Trolley Basin of water Limb support Sofratulle Flavine lotion Apron Consent form Linen Adhesive Plaster Dressing set Sedatives</p> <p>X-ray - AP view - lateral (post reduction)</p>
7. Observation	<ol style="list-style-type: none"> <li>1. Observe and record circulation.</li> <li>2. Refer to doctor if any complication arises</li> </ol>	<p>Observe circulation and sensation of distal part of the limb for at least an hour (out – patient).</p>	<p>Circulation chart</p>
8. Health education	<ol style="list-style-type: none"> <li>1. Care of the wound if any.</li> <li>2. Encourage movement of extremities.</li> <li>3. Care of Plaster cast.</li> <li>4. Advise patient to return to Orthopaedic Out-patient Clinic /Emergency Department immediately if develops :               <ol style="list-style-type: none"> <li>4.1 swelling</li> <li>4.2 severe pain</li> <li>4.3 numbness</li> <li>4.4 change in color of extremities</li> <li>4.5 broken POP</li> <li>4.6 fever</li> <li>4.7 foul smell</li> </ol> </li> </ol>	<p>Observe aseptic technique when necessary. Advice slip must be given to the patient.</p>	
9. Documentation	<p>Record in the procedure book. Record in patient's BHT. Fill Billing Code.</p>	<p>Entries to be legible, signed &amp; dated.</p>	<p>Procedure book Patient's BHT</p>

### 3. APPLICATION OF PLASTER SLAB

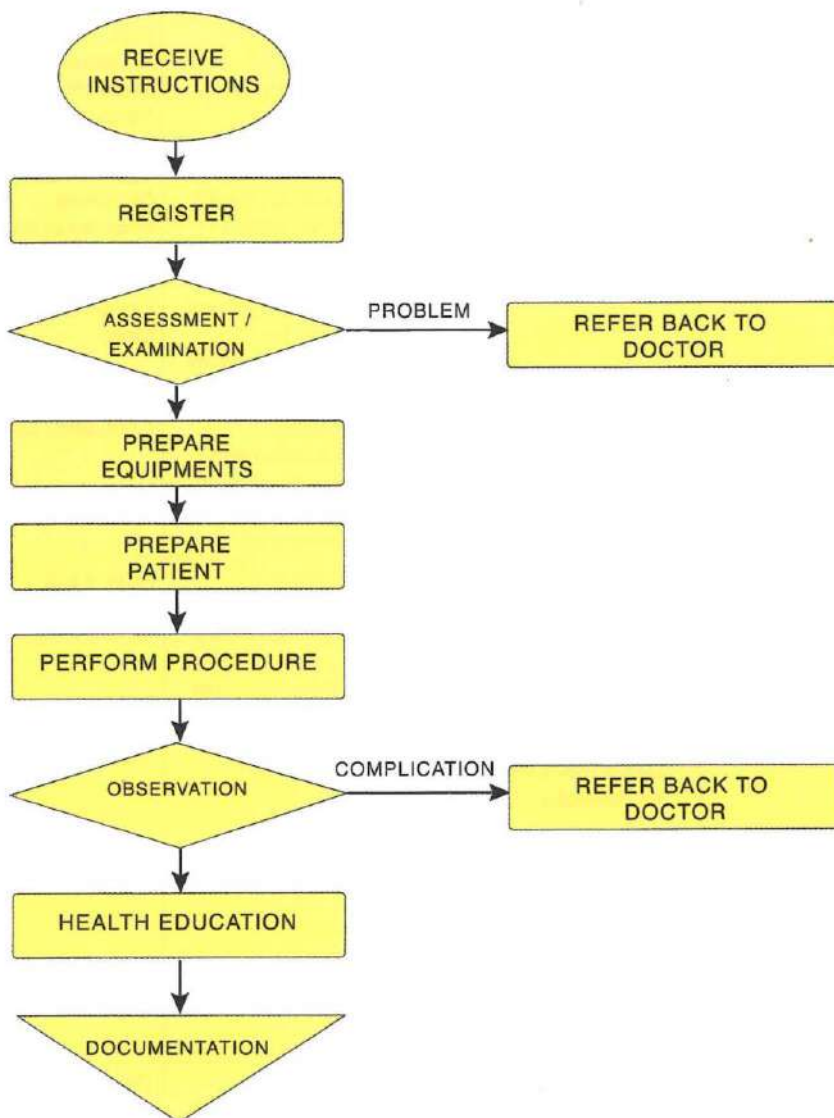


### 3. APPLICATION OF PLASTER SLAB

Activity	Work Process	Standard	Requirement
1. Receive instructions	Read instruction.	Written instruction by doctor in BHT/ prescription slip.	Patient's BHT/ Prescription slip
2. Registration	Register patient.	Register patient particulars in the procedure registration book.	Procedure registration book
3. Assessment / examination	1. Confirm fracture / dislocation/affected limb/ site/side. 2. Assess deformity of the limb. 3. Check Condition of wound if any. 4. Check and record circulation 5. Check Sensation & movement of the limb	Review X-ray  Observe aseptic technique when necessary.	X-ray - AP view - lateral  Circulation chart.
4. Prepare equipments	Prepare equipment, medication and lotions.	Prepare as required for the procedure.	POP Trolley Basin of Water Limb Support Cotton & Gauze Adhesive Plaster Dressing Set Sofratulle Flavine Lotion Apron Scissors Consent Linen
5. Prepare patient	1. Explain to patient/relatives/ parents the procedure to be carried out. 2. Check consent. 3. Confirm with patient for injured limb. 4. Place patient in a comfortable position. 5. Place linen protector under the injured limb.	At all times be courteous kind and gentle.  Validity of consent.	

Activity	Work Process	Standard	Requirement
6. Perform procedure	1. Dress and bandage wound if any. 2. Apply Plaster Slab. 3. Mark window if necessary.	Observe aseptic technique when necessary.  Apply POP according to PANDUAN PRAKTIKAL PEMASANGAN PLASTER KAST (KKM).page 11 para 4.3  (Refer to relevant pages for different types of casting).	POP Trolley Basin of Water Limb Support Cotton & Gauze Adhesive Plaster Dressing Set Syringes Sedation Spirit Swab Sofratulle Flavine Lotion Apron Scissors Consent Linen
7. Observation	1. Observe and record circulation. 2. Refer to doctor if any complication arises	Observe circulation and sensation for at least an hour (out – patient's ).	Circulation chart
8. Health education	1. Care of the wound if any. 2. Encourage movement of extremities. 3. Care of plaster slab 4. Advise patient to return to Orthopaedic Out-patient Clinic/Emergency Department immediately if he develops :  4.1 swelling 4.2 severe pain 4.3 numbness 4.4 change in color of extremities 4.5 broken plaster slab 4.6 fever 4.7 foul smell	To observe aseptic technique when necessary.  Advice slip must be given to the patient.	Advice slip
9.Documentation	Record in the procedure book. Record in patient's BHT. Fill Billing Code	Entries to be legible, signed & dated.	Procedure book Patient's BHT

#### 4. OPEN WEDGING OF PLASTER CAST



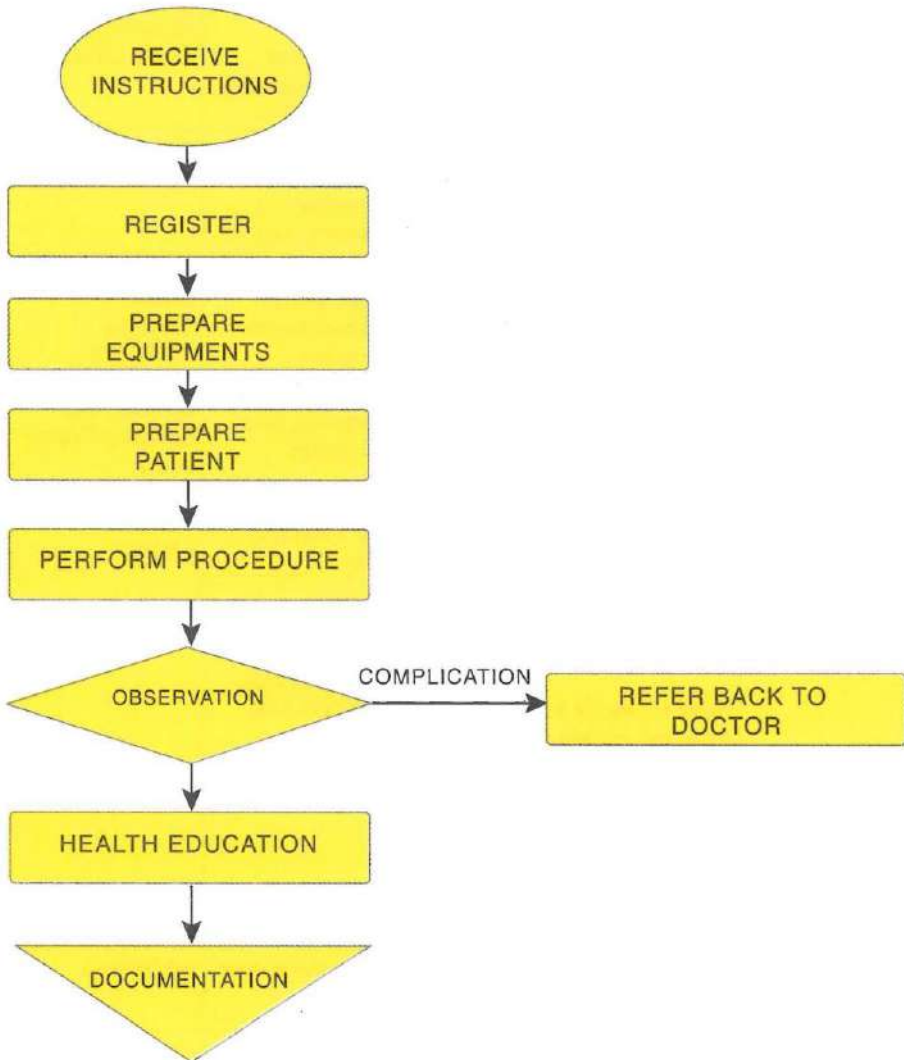


#### 4. OPEN WEDGING OF PLASTER CAST

Activity	Work Process	Standard	Requirement
1. Receive instructions	Read instruction.	Written instruction by doctor in BHT/ prescription slip.	Patient's BHT Prescription slip
2. Registration	Register patient.	Register patient particulars in the procedure registration book.	Procedure registration book.
3. Assessment / examination	1. Confirm site / side and angulation of fracture. 2. Check for integrity of plaster cast. 3. Check for rotational angulation. 4. Check for amount correction needed.	Review x-rays  Duration of injury (ideally after 3 weeks when the fracture is sticky).	X-ray - AP view - lateral
4. Prepare equipments	Prepare equipment, medication and lotions.	Prepare as required for the procedure.	POP Trolley Basin of Water Limb Support Cotton & Gauze Adhesive Plaster Dressing Set Syringes Sedation Spirit Swab Sofratulle Flavine Lotion Apron Linen
5. Prepare patient	1. Explain to patient relatives/ parents the procedure to be carried out. 2. Confirm with patient the affected limb. 3. Place patient in a comfortable position. 4. Place linen protector under the injured limb. 5. With help of an assistant, hold and position the limb as required. 6. Give sedation if required.	At all time be courteous, kind and gentle	
6. Perform procedure	Review x-ray. Draw lines along the longitudinal axis of the proximal and distal fragment. Measure the angle of the deformity. Mark and cut the POP at the level of the fracture. Correct the angulation, insert the wedge according to the angle of deformity. Reinforce the wedge with padding and plaster. Send for post wedging x-ray.	Use goniometer.  Cut 3/4 of the circumference of POP.  Angulation should be corrected	X-ray - AP view - lateral (post wedging) Goniometer Plaster Marker Wedge

Activity	Work Process	Standard	Requirement
7. Observation	<p>Observe the circulation and sensation.</p> <p>Take necessary action if complication arises.</p>	<p>Record observation for Circulation (In patient).</p> <p>Avoid doing wedging near joints, loose POP, soft POP.</p> <p>Do not open window at wedging area and vice - versa.</p>	Circulation chart
8. Health education	<ol style="list-style-type: none"> <li>1. Care of the wound if any.</li> <li>2. Encourage movement of the injured extremities.</li> <li>3. Care of Plaster cast.</li> <li>4. Advise patient to return to clinic / Emergency Department immediately if he develops:               <ol style="list-style-type: none"> <li>4.1 swelling</li> <li>4.2 severe pain</li> <li>4.3 numbness</li> <li>4.4 change in colour of affected extremities</li> <li>4.5 fever</li> <li>4.6 broken plaster cast</li> <li>4.7 foul smell.</li> </ol> </li> </ol>	<p>To observe aseptic technique.</p> <p>Advice slip must be given to patient.</p>	Advice slip
9. Documentation	<p>Record in the procedure book.</p> <p>Record in patient BHT.</p>	<p>Entries to be legible, signed &amp; dated.</p>	<p>Procedure book</p> <p>Patient's BHT</p>

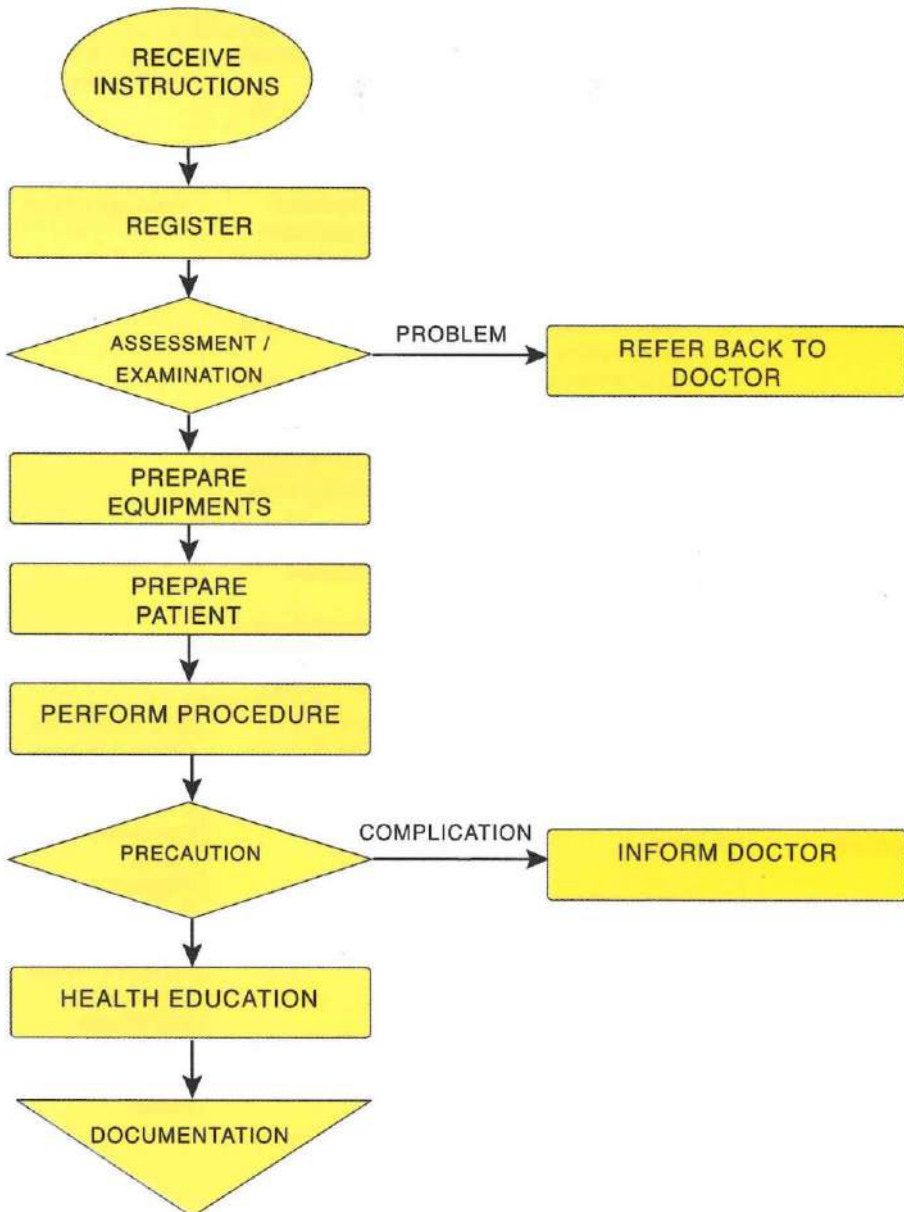
## 5. REMOVAL OF PLASTER CAST



## 5. REMOVAL OF PLASTER CAST

Activity	Work Process	Standard	Requirement
1. Receive instructions	Read instruction.	Written instruction in BHT/ prescription slip by doctor.	Patient's BHT /Prescription slip
2. Registration	Register patient.	Register patient particulars in the procedure registration book.	Procedure registration book
3. Prepare equipments	Prepare equipment.	Prepare equipment as required for the procedure.	POP Cutter/saw Shears Spreader POP Knife
4. Prepare patient	<ol style="list-style-type: none"> <li>1. Explain to patient relatives/ parents the procedure.</li> <li>2. Confirm the affected limb.</li> <li>3. Place patient in the comfortable position.</li> <li>4. Place linen protector .</li> <li>5. Hold and position the limb.</li> </ol>	<p>At all times be courteous, kind and gentle.</p> <p>Refer to instruction and x-ray.</p>	<p>Lister Scissors Dressing Set Adhesive Plaster Linen X-ray - AP view - lateral</p>
5. Perform procedure	<p>Cut the Plaster cast with POP cutter/saw using the correct technique.</p> <p>Refer to Doctor if any of the following complications is present:</p> <ul style="list-style-type: none"> <li>• pressure sore,</li> <li>• stiffness of the joint,</li> <li>• allergies,</li> <li>• circulation or</li> <li>• nerve impairment.</li> </ul>	<p>Refer to PANDUAN PRAKTIKAL PEMASANGAN PLASTER KAS (KKM) Page 14 para 4.5</p>	
6. Health education	<p>Care of the wound if any.</p> <p>Teach Crutch walking.</p> <p>Encourage exercise</p> <p>Follow up Clinic.</p>	<p>To observe aseptic technique.</p> <p>Advice slip must be given to patient's</p>	Advice slip
7.Documentation	<p>Record in the procedure book.</p> <p>Record in patient BHT.</p>	<p>Entries to be legible, signed and dated.</p>	Procedure book /Patient's BHT

## 6. APPLICATION OF SKIN TRACTION





## 6. APPLICATION OF SKIN TRACTION

Activity	Work Process	Standard	Requirement
1. Receive instructions	Read instruction.	Written instruction in BHT/ prescription slip by doctor.	Patient's BHT /Prescription slip
2. Registration	Register patient.	Register patient particulars in the procedure registration book.	Procedure registration book
3. Assessment / examination	1. Check for wound. 2. Check for dermatitis, varicose veins, ischaemic limb or insensate limb. 3. Ask patient for history of diabetes. 4. Ask patient for history of plaster allergy. 5. Confirm the site & side for fraction.	Do not apply over an open wound.  Contraindicated in dermatitis, varicose veins, ischaemic limb or insensate limb.  Use cautiously in diabetics.  Contraindication for patient's with plaster allergy.	X-ray film if any
4. Prepare equipments	Prepare equipment as required.	Prepare as required for the procedure.	Skin Traction Kit Crepe Bandage Felt
5. Prepare patient	Place patient in a supine position.  Explain to patient relatives/ parents about the procedure to be carried out.  Place a linen protector under the injured limb .  Shave and clean the affected limb.		Thomas Splint Bohler's Braun Frame Weight & hanger Buck Extension Scissors Adhesive Plaster Cotton Wool Bed Blocks Linen Protector Shaving set Pillow.

Activity	Work Process	Standard	Requirement
6. Perform procedure	<p>Begin procedure with help of an assistant.</p> <p>Hold the injured limb with care.</p> <p>Protect bony prominences.</p> <p>Apply skin traction and bandage.</p> <p>Begin bandaging</p> <p>Fix a Thomas Splint to the affected limb and bandage if required.</p> <p>Tie the Traction cord to the weight running over a pulley /extension buck.</p> <p>Place a pillow under the injured limb if required.</p>	<p>Begin bandaging at distal end. Avoid Achilles tendon (for lower limb).</p> <p>Fix skin traction and bandage neatly.</p> <p>At all time be courteous, kind and gentle</p> <p>Maintain principles of Traction.</p> <ul style="list-style-type: none"> <li>• position</li> <li>• counter traction</li> <li>• friction</li> <li>• continuous traction</li> <li>• line of pull</li> </ul>	<p>Skin Traction Kit</p> <p>Crepe Bandage</p> <p>Felt</p> <p>Thomas Splint</p> <p>Bohler's Braun Frame</p> <p>Weight &amp; hanger</p> <p>Buck Extension</p> <p>Scissors</p> <p>Adhesive Plaster</p> <p>Cotton Wool</p> <p>Bed Blocks</p> <p>Linen Protector</p> <p>Shaving set</p> <p>Pillow.</p>
7. Health education	<p>1. Personal hygiene.</p> <p>2. Psychological support.</p> <p>3. Care of the skin traction.</p>	<p>Do not meddle with the bandage. Keep the weight always hanging free.</p> <p>Do active/passive exercise of the affected limb.</p> <p>Do not scratch over traction area.</p> <p>Inform the staff if any problem.</p>	Advice slip
8.Documentation	<p>Record procedure.</p> <p>Record in patient BHT.</p> <p>Fill billing code.</p>	<p>Entries to be legible, signed &amp; dated.</p>	<p>Procedure book</p> <p>Patient's BHT</p>

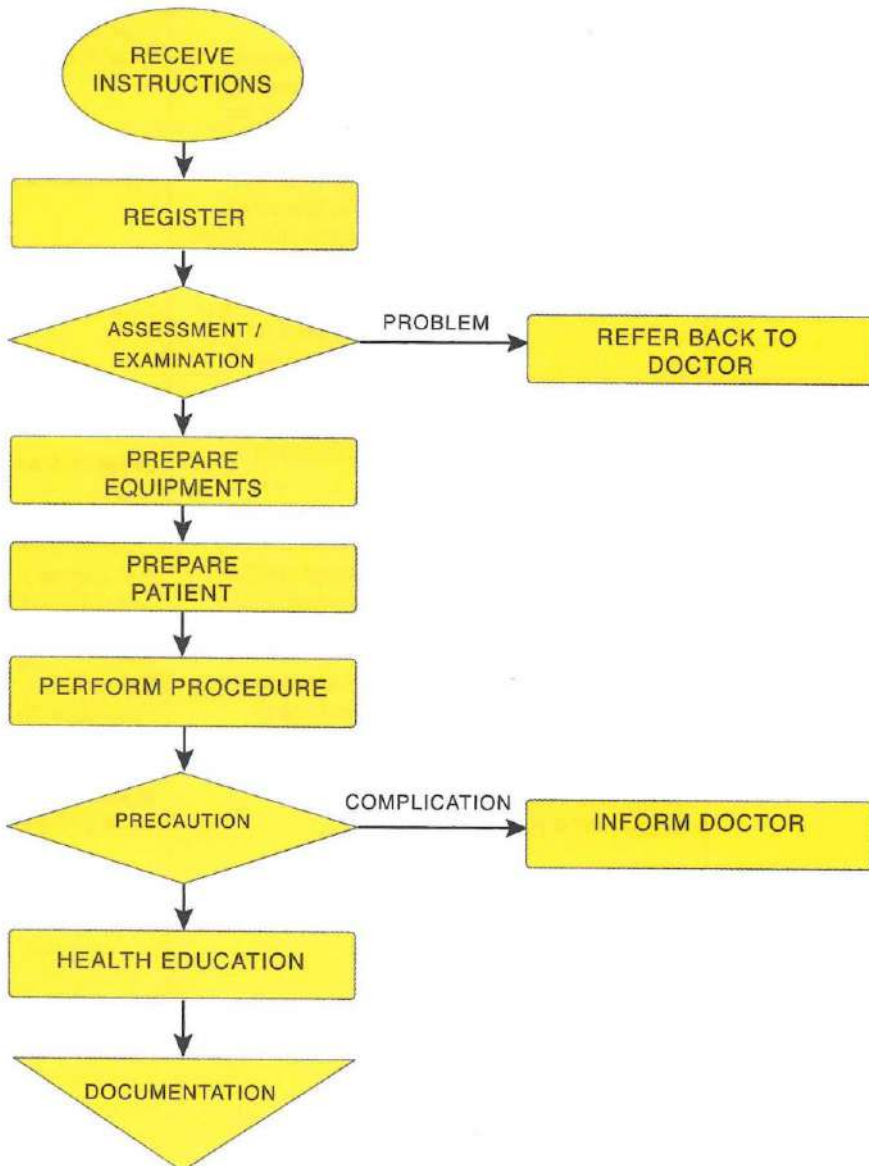
**PRECAUTIONS;**

1. Do not apply over an open wound .
2. Contraindicated in dermatitis, varicose veins, ischaemic limb or insensate limb.
3. Use cautiously in diabetics .
4. Contraindication for patient's with plaster allergy.

Maintain principles of Traction.

- position
- counter traction
- friction
- continuous traction
- line of pull

## 7. APPLICATION OF SKELETAL TRACTION



## 7. APPLICATION OF SKELETAL TRACTION

Activity	Work Process	Standard	Requirement
1. Receive instructions	Read instruction.	Written instruction in BHT/ prescription slip by doctor	Patient's BHT / Prescription slip
2. Registration	Register patient.	Register patient particulars in the procedure registration book.	Procedure registration book
3. Prepare equipments	Prepare equipment.	Prepare equipment as required for procedure	Bohler's Braun Frame Bohler's Stirrup / Thomas' Splint. Traction cord Crepe Bandage Weight Sling Safety Pin Padding Material Traction appliances Scissors. Linen protector
4. Prepare patient	Place patient in a supine position. Explain to patient the procedure to be carried out. Place a linen protector under the injured limb.	At all times be courteous, kind and gentle	
5. Perform procedure	Fix Bohler's Stirrup on to Steinmann Pin.  Place the injured limb over the Bohler's Braun Frame or Thomas' Splint.  Fix traction cord to the Bohler's Stirrup and connect it to the weight over a pulley.  Pad and bandage the affected limb.  Cover the sharp end of Steinmann Pin.	Weight not to exceed 1/10 of body weight.  Prevent patient from injury	



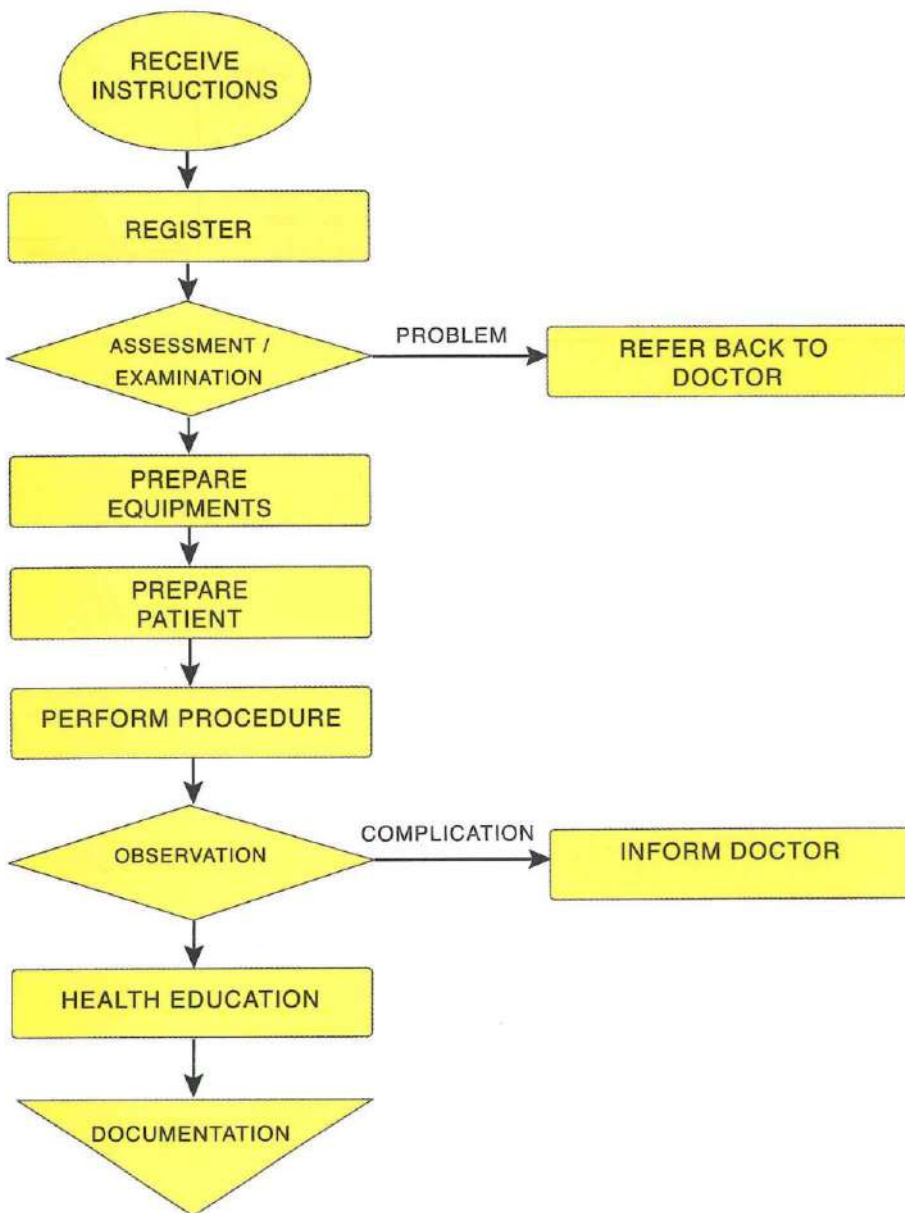
Activity	Work Process	Standard	Requirement
6. Health education	Care of the wound. Personal hygiene. Psychological support. Care of skeletal traction.	Observe aseptic technique Do not meddle bandage. Keep the weight always hanging free. Active exercise of the affected limb. Inform the staff if any problem.	Advice slip
7.Documentation	Record in the procedure book. Record In patient BHT.	Entries to be legible, signed and dated.	Procedure book Patient's BHT

## PRECAUTIONS

Maintain principles of traction.

1. position
2. counter traction
3. friction
4. continuous traction
5. line of pull.

## 8. APPLICATION OF TOURNIQUE



## 8. APPLICATION OF TOURNIQUET

Activity	Work Process	Standard	Requirement
1. Receive instructions	Receive instruction.	Receive instruction from doctor.	Patient's BHT
2. Assessment / examination	Rule out contraindication for tourniquet application.	<p>Ensure no leakage of air to maintain the required pressure.</p> <p>Contraindicated in ischaemic limb.</p> <p>Exsanguination contraindicated in: infection, tumour and thrombosis.</p>	
3. Prepare equipments	Prepare Tourniquet unit and cuff.	Test to ensure tourniquet unit is functional and in good condition.	Tourniquet Unit Cuffs-various sizes Orthoban Esmarch Bandage Timer
4. Prepare patient	Place patient in required position.	Patient's position according to the type of surgery as required by surgeon.	
5. Perform procedure	<p>Apply orthoban and suitable size cuff.</p> <p>Elevate the affected limb.</p> <p>Exsanguinate limb with Esmarch bandage if required.</p> <p>Inflate cuff to the recommended pressure.</p> <p>Set the tourniquet starting time.</p> <p>Inform anesthetist time of inflation.</p> <p>Inform operating surgeon at appropriate intervals.</p> <p>After completion of surgery, deflate and remove cuff.</p> <p>Check blood circulation of the affected limb.</p>	<p>Suggested Pressure :</p> <p><u>For upper limb</u> systolic + (50 to 75 mm Hg)</p> <p><u>For lower limb</u> systolic x 2</p> <p>Alert operating surgeon at appropriate intervals.</p>	

Activity	Work Process	Standard	Requirement
6.Documentation	Record name, time of inflation, deflation and pressure applied in the specific notes.	Entries to be legible, signed and dated.	Patient's record

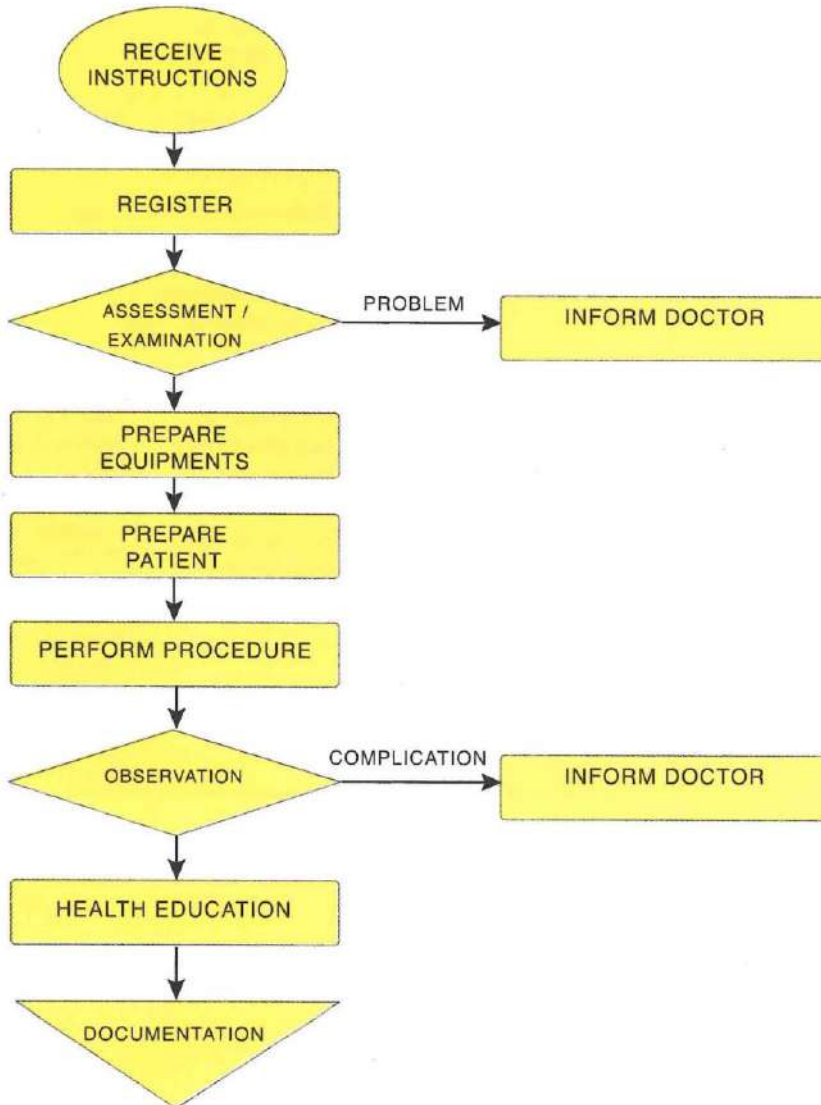
**PRECAUTIONS;**

Ensure no leakage of air to maintain the required pressure.

Contraindicated in Ischaemic limb.

Exsanguination contraindicated in :  
infection, tumour and thrombosis.

## 9. REMOVAL OF EXTERNAL FIXATOR



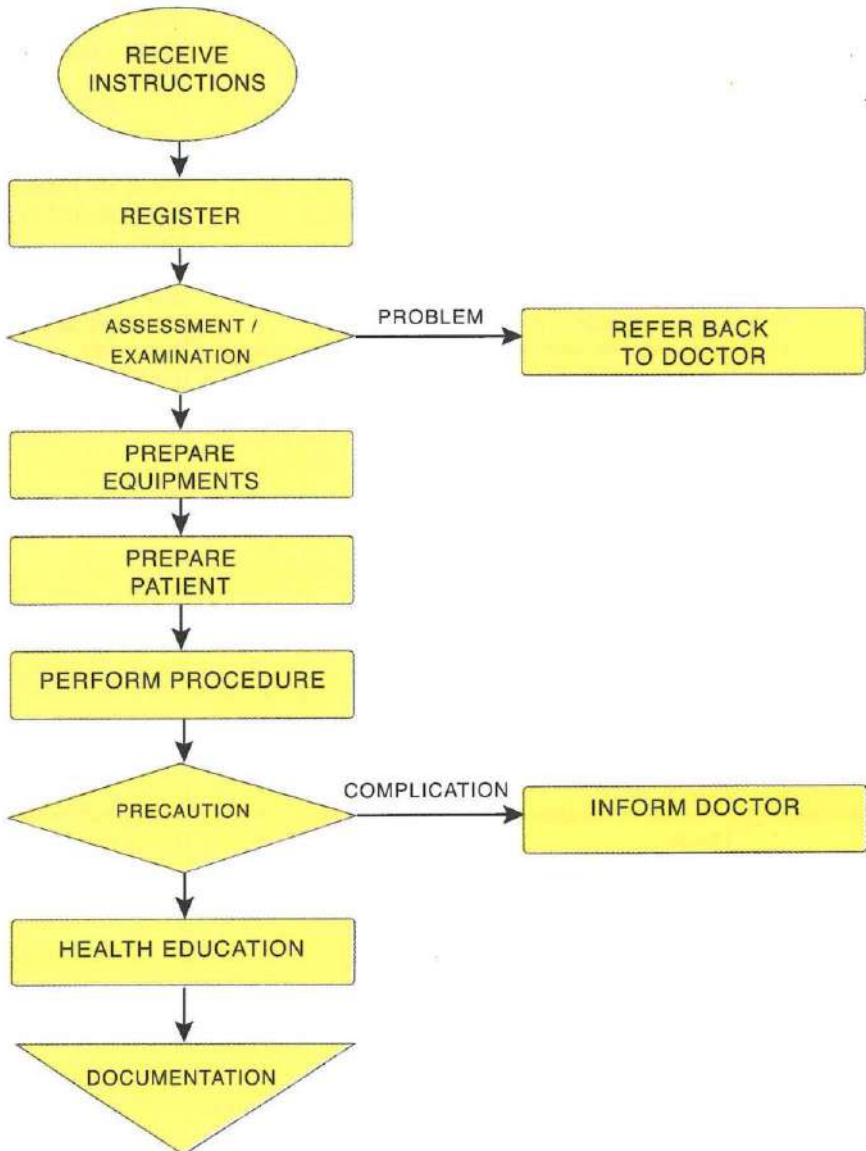


## 9. REMOVAL OF EXTERNAL FIXATOR

Activity	Work Process	Standard	Requirement
1. Receive instructions	Read instruction.	Written instruction as given by doctor.	Patient's BHT /Prescription slip
2. Registration	Register patient.	Register patient in the procedure registration book.	Procedure registration book
3. Assessment / examination	Review X-ray. Check deformity of limb Check condition of wound	Deformities of the limb, condition of wound & any pin tract infection to be noted to doctor.	X-ray - AP view - lateral
4. Prepare equipments	Prepare equipment.	Prepare equipment as required for the procedure.	Open Wrench Allen Key Socket wrench Pliers
5. Prepare patient	Place patient in a comfortable position.  Explain to patient relatives/ parents the procedure to be carried out.  Place linen protector under the injured limb.	At all times be courteous, kind and gentle.	T - Handle Dressing Set Sterile Gauze Adhesive Plaster Povidine Iodine Sedation. C&S Bottle Sterile swab Pathological Lab Form Linen

Activity	Work Process	Standard	Requirement
6. Perform procedure	<p>Begin procedure with help of an assistant.</p> <p>Hold the injured limb with care.</p> <p>Clean the affected area and surrounding skin.</p> <p>Take Swab for C&amp;S if required.</p> <p>Use T-Handle to remove Schanz's Pin with proper technique.</p> <p>Dress the wound.</p> <p>Rest patient in comfortable position</p>	<p>At all time be courteous, kind and gentle.</p> <p>For the removal of Halo Vest apply cervical collar before removal.</p> <p>Sedation if necessary.</p> <p>Observe aseptic technique.</p> <p>Use appropriate appliances</p> <p>Refer to Doctor if there is any complication.</p>	<p>Open Wrench</p> <p>Allen Key</p> <p>Socket wrench</p> <p>Pliers</p> <p>T - Handle</p> <p>Dressing Set</p> <p>Sterile Gauze</p> <p>Adhesive Plaster</p> <p>Povidine Iodine</p> <p>Sedation.</p> <p>C&amp;S Bottle</p> <p>Sterile swab</p> <p>Pathological</p> <p>Lab Form</p> <p>Linen</p>
7. Observation	<p>Care of the wound.</p> <p>Teach Crutch walking.</p> <p>Follow up Clinic.</p> <p>Exercise the affected limb.</p>	<p>To observe aseptic technique</p> <p>Advice slip must be given to patient's</p>	<p>Advice slip</p> <p>Crutches</p>
8.Documentation	<p>Record in the procedure book.</p> <p>Record in patient BHT.</p> <p>Fill billing code</p>	<p>Entries to be legible, signed &amp; dated.</p>	<p>Procedure book</p> <p>Patient's BHT</p>

## 10. REMOVAL OF KIRSCHNER WIRES



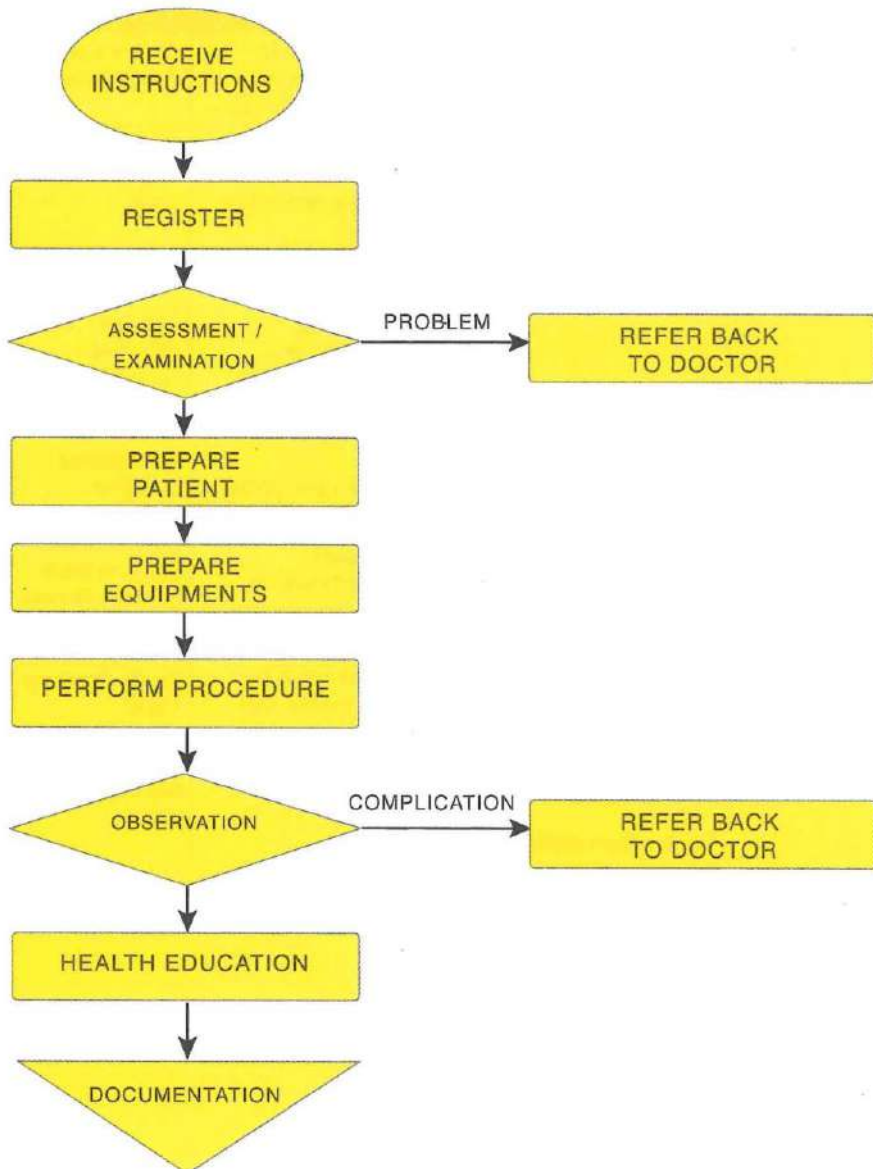
## 10. REMOVAL OF KIRSCHNER WIRES

Activity	Work Process	Standard	Requirement
1. Receive instructions	Read instruction.	Read written instruction as given by doctor.	Patient's BHT /Prescription slip
2. Registration	Register patient.	Register patient in the procedure registration book.	Procedure Registration book
3. Assessment / examination	Review X-ray  Check deformities of the limb, check condition of wound & any pin tract infection.	Any deformities of the limb, sepsis of the wound & any pin tract infection to be noted to doctor.	X-ray film
4. Prepare equipments	Prepare equipment and drugs.	Prepare equipment and drugs as required for the procedure.	Pliers T-Handle with chuck & key. Dressing set Adhesive Plaster.
5. Prepare patient	Place patient in a comfortable position.  Explain to patient relatives/ parents the procedure to be carried out.  Place linen protector under the injured limb.  Review x-ray.	At all times be courteous, kind and gentle.  Sedation to be given if necessary.	Antiseptic Lotion. Swab, C&S Bottle Pathological Lab Form Linen Sedative

Activity	Work Process	Standard	Requirement
6. Perform procedure	<p>Begin procedure with help of an assistant.</p> <p>Hold the injured limb with care.</p> <p>Clean the affected part.</p> <p>Take Swab for C&amp;S if required.</p> <p>Use pliers / T- Handle to pull the wires out.</p> <p>Dress wound.</p> <p>Rest patient in comfortable position</p>	<p>Observe aseptic technique.</p> <p>Refer to doctor if there is any complication.</p>	<p>Pliers</p> <p>T-Handle with chuck &amp; key.</p> <p>Dressing set</p> <p>Adhesive Plaster.</p> <p>Antiseptic Lotion.</p> <p>Swab,</p> <p>C&amp;S Bottle</p> <p>Pathological Lab Form</p> <p>Linen</p> <p>Sedative</p>
7. Health education	<p>Care of the wound.</p> <p>Follow-up clinic.</p>	<p>To observe aseptic technique</p> <p>Advice slip must be given to patient's</p>	Advice slip
8.Documentation	<p>Record in the procedure book.</p> <p>Record in patient BHT.</p>	<p>Entries to be legible, signed &amp; dated.</p>	<p>Procedure book</p> <p>Patient's BHT</p>



## 11. MINOR SURGERY



## 11. MINOR SURGERY

Activity	Work Process	Standard	Requirement
1. Receive instructions	Read instruction. Verify minor surgery check list.	Read written instruction as given by doctor.	Patient's BHT /Prescription slip
2. Registration	Register the patient's.	Register the patient particulars in the procedure book	Procedure Registration book
3. Assessment / examination	Examine of the affected area.	To observe excessive bleeding, excessive swelling, acute pain and other abnormalities  To inform doctor if required	T&S Set I & D Set Aspiration set Excision set Local Anaesthesia Syringes /needles
4. Prepare equipments	Prepare equipment.	Prepare equipment as required for the procedure.	Sterile Glove Surgical Mask Solution Normal Saline Antiseptic Lotion
5. Prepare patient	Explain to patient the procedure to be carried out.  Place patient in a comfortable position.  Place a linen protector under the intended area.	At all times be courteous and kind.	Sterile Dressing Towel Adhesive Plaster Sutures Bandage Linen

Activity	Work Process	Standard	Requirement
6. Perform procedure as Appendix 1	<p>Set intravenous drip if required</p> <p>Clean the affected part and surrounding area with antiseptic lotion.</p> <p>Drape the area.</p> <p>Administer local anesthesia.</p> <p>Perform minor surgery.</p> <p>Dress the surgical wound.</p> <p>Inform doctor if complication arises.</p>	<p>Observe aseptic technique.</p> <p>Local Anaesthesia to be given according to body weight.</p> <p>REFER TO APPROPRIATE PROCEDURE PROTOCOL.</p>	
7. Health education	<p>Care of the wound.</p> <p>Follow up clinic.</p>	<p>To observe aseptic technique</p> <p>Advice slip must be given to patient's</p>	<p>Advice slip</p> <p>Appointment card</p>
8.Documentation	<p>Record in the procedure book.</p> <p>Record in patient BHT.</p> <p>Fill billing code.</p>	<p>Entries to be legible, signed &amp; dated.</p>	<p>Procedure book</p> <p>Patient's BHT</p>

**PRECAUTIONS;**

Avoid injecting into vessels

### LIST OF MINOR SURGERY PROCEDURES

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1. Insertion of Steinmann Pin
2. Knee Aspiration (Haemarthrosis)
3. Toilet & Suture
4. Incision & Drainage
5. Desloughing
6. Nail Avulsion
7. Removal of Simple cysts, Ganglions and Lipomas.

## CHECKLIST FOR MINOR SURGERY

Appendix 2

Patient Name : ..... Date : .....

R/N : ..... Ward/Clinic : .....

No.	Particulars	YES	NO	Remarks
1.	Written instruction from doctor			
2.	Written Consent			
3.	Check Patient's particulars : a) Correct R/N: / NRIC b) Name c) Correct BHT			
4.	Confirm with patient the correct site & side for procedure.			

Checked by :

Signature : .....

Name : .....

Date/Time : .....



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