Fracture Clinic
& Orthopaedic
Outpatients
Department

Student Name:
Fracture Clinic and Orthopaedic
Outpatients Department
Mission

To provide a professional orthopaedic outpatient and fracture clinic service to the patients of Hutt Valley District Health Board which focuses on the needs of the patient and their family/caregivers

Objectives

1. To provide each individual with competent, considerate and respectful care, appropriate to his or her needs.

2. To provide ongoing education to staff, patients and their family/caregivers.

3. To strive to improve the quality of care and service.

4. To advocate for our patients supporting their rights and choices.
Daily activities

**Fracture Clinic**
Acute injury follow-up - mainly fracture pts referred from ED, GP’s or transfers from other DHB’s and discharged post surgery ward patients.

**Orthopaedic Clinic**
GP referrals of patients with orthopaedic conditions, new and follow-up patients

**Acute fracture treatment**
Patients are referred from Emergency Department or GP for treatment / plasters
Acute Xrays of concern to be referred to Registrar on call

**Ward referrals**
For plaster trims, repairs, change of plasters, application of special casts - e.g. hip spica, cast brace. Requisition is faxed from the wards for these

**Deferred plastering**
Arranged during fracture clinics when more time is required - e.g. cast braces, PTB

**Dressings**
For outpatients and any acutes requiring continued dressings and who are going to be seen in our clinics

**General household duties**
To ensure the area is kept clean, tidy, restocked and safe.

**Pre-op assessments clinics**
Tuesday, Wednesday, Thursday and Friday
These are managed by Pre-assessment clinic in General OPD. Pts are seen in Fracture clinic for surgery consent.

**Orthotic clinics**
Staff from Orthotic Services are in attendance for two sessions per week: Tuesday and Thursday mornings

**Ortho Teaching Clinics**
Mr Johnstone runs teaching clinics for 5th Medical student on Wednesdays during the student year

Welcome!!
We are looking forward to working with you
Contacts

This should contain information on all the key contacts for the ward/unit

<table>
<thead>
<tr>
<th>Fracture Clinic</th>
<th>(04) 570 9099</th>
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</thead>
<tbody>
<tr>
<td>Clinical Nurse Manager</td>
<td>Julie Gordon</td>
</tr>
</tbody>
</table>

Please contact Julie Gordon if you are unable to work your shift at the unit.

Your Preceptor

You will be allocated one main preceptor, this preceptor will be responsible for helping you completing your objectives. We will endeavor to ensure that you mainly work with this preceptor, however, due to shift work this is not always possible. It is your responsibility to ensure the nurse you are working with is aware of your objectives for the day/week. You must provide evaluations and/or other paperwork to your preceptor in a timely fashion (i.e. not on the due date!!). You preceptor will not complete any evaluations if you give it to them on your last days in the unit.

If you have any concerns or questions do not hesitate to contact 570 9099.
Expectations of the Student Nurse while in Fracture Clinic

Students work in the fracture clinic from 8am to 4.30pm. At times the morning clinics will start at 8.30am and the afternoon clinics will run until 5pm, so your preceptor may stay on after you finish.

We have a few expectations of student nurses working in the fracture clinic:

- It is expected that you arrive on time for your shift and if you are going to be late or you are unwell and can not come to call the unit on 570 9099
- You must complete the full shift that you are allocated to work – if you are unable to do so please discuss this with your preceptor, clinic nurse or CNM. A lot of learning occurs at quiet times in the unit!!
- It is important for your preceptor or the nurse you are working with that she is aware of your objectives in your first week
- Due to infection control a clean uniform must be worn, long hair must be tied back and cardigans must not be worn when working on the floor
- If you are not achieving your objective please see Julie or your preceptor (before the last week in the clinic)
- Please ensure all documentation you need to complete for the polytechnic/university is accomplished before the last days in the unit – your preceptor will not complete any paper that is given to him or her if it is given in the last days of your placement

Safety Measures in Fracture Clinic

Please be aware of specific safety measures in the unit. This should include:

In the event of a cardiac arrest student nurses are to undertake an observing role only, you are not required to participate.

In the event of a fire remove yourself from the source and inform your preceptor/nurse.

The fracture clinic can be a noisy environment to work in during clinic times, please protect your hearing and wear ear muffs during cast removal.

Please wear plastic aprons over your uniform and gloves and face masks when assisting with casting.
# Treasure Hunt

This list is designed to help you become familiar with the environment, but is by no means exhaustive of all the things you will be required to locate.

- Clinical Nurse Manager Office
- Toilet-Key pad combination
- Where to store your bags
- Staff tea room
- Discharge information pamphlets
- Sterile instruments
- Stitch cutters
- Clip removers
- Plain Gauze
- Casting trolleys/buckets
- Casting products
- Clean utility room
- Dressing Materials
- Sterile Gloves
- Dressing Supplies
- Dressing trolleys
- Dirty instruments
- Clinical policies & procedures
- Assessment rooms
- Linen supplies
- Arm block trolley
- Roster
- Manual BP machine / stethoscope
- Suction Equipment
- Bio-hazard bags
- Tympanic thermometer covers
- Stationery supplies
- Photocopier
- Entonox
- Laboratory forms
- Oxygen isolation “shut off” valve
- Online Incident Forms
- Cortisone trays
- Fire exits
- Fire extinguishers
Objectives

1. To have knowledge of how patients are admitted to Fracture Clinic via:
   - Emergency Department and Radiology
   - GP and Private Radiology
   - Transferred patients from other hospitals

2. To learn how to care for patients with casts on in the ward setting and as outpatients – to be able to advise patients on the following:
   - Elevation of the limb
   - Exercises for the limb
   - Circulation observations – colour, warmth, movement, sensation
   - Hygiene care
   - Positioning the limb
   - Handling the cast – how to prevent damage to the cast and underlying tissues
   - Mobilisation and weightbearing status
   - Using crutches

3. To be aware of the different casting materials available:
   - Plaster of paris
   - Fibre glass
   - Soft cast
   - MOK cast

4. To observe the application and removal of plasters – if time permits to be shown a simple cast

5. The provision of appropriate care to the patient and whanau with support and supervision from the preceptor, including
   - Accurate assessment
   - Competent implementation of care
   - Documentation

6. Gain an understanding of the different roles of the multidisciplinary team
   Eg Drs, nurses, reception staff, therapists.

7. Practice good infection control measures
8 Identifying the different types of fractures

- Identifying types of fractures on x-rays
- Basic knowledge around fracture healing

9 The use of pain management during casting

- Entonox
- The role of conscious sedation and regional analgesia

10 Wound management – trauma and surgery

- Performing aseptic wound dressings and wound assessment under supervision from preceptor
- Removal of sutures and clips from a surgical wound under supervision from preceptor

**Common Presentations to Fracture Clinic**

Common presentations to fracture clinic include:

- Surgical wounds
- Chronic wounds/ulcers
- Fractures
- Casting products
- Eczema

**Common Medications**

The following is a list of some of the common medications used in the fracture clinic, please read up on these before you attend the placement.

<table>
<thead>
<tr>
<th>Medication</th>
<th>Formulation</th>
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<tbody>
<tr>
<td>Citanest</td>
<td>injected intravenously</td>
</tr>
<tr>
<td>Entonox</td>
<td>inhaled</td>
</tr>
<tr>
<td>Kenacort – A</td>
<td>injected</td>
</tr>
<tr>
<td>Panadol</td>
<td>orally</td>
</tr>
<tr>
<td>Xylocaine 1%</td>
<td>injected</td>
</tr>
</tbody>
</table>
Pre-reading/Resources

Suggested Web sites to visit:

www.eorthopod.com/content/library
www.imageinterpretation.co.uk

Suggested reading Material:

(found below work station bench in plaster room)

Handbook of Fractures, 3rd Ed, Koval, K.J and Zuckerman, J.D.
Practical Fracture Treatment, McRae, R.
Introduction to casting ., Kinealy, J. 2010.

Also look on shelves in nurses work station room outside CNM office.
INITIAL FRACTURE ASSESSMENT

Answer these questions before you call the orthopaedic surgeon.

1. What bone is involved?
   SELECT ONE OF THE FOLLOWING THREE CHOICES
   A. Hip — Closed fracture.
   B. Yes, with a clear wound less than 1 cm in length — A minimally open fracture.
   C. Yes, with a large and/or dirty wound — A significantly open fracture.

2. Is there any break in the skin at or near the fracture site?
   SELECT ONE OF THE FOLLOWING THREE CHOICES
   A. No — Closed fracture.
   B. Yes, with a clear wound less than 1 cm in length — A minimally open fracture.
   C. Yes, with a large and/or dirty wound — A significantly open fracture.

3. Are there any joint dislocations?
   SELECT ONE OF THE FOLLOWING THREE CHOICES
   A. The bone is now in two pieces — Simple fracture.
   B. The bone is now in multiple pieces — Severe comminuted fracture.
   C. The bone is now in two pieces — Comminuted fracture.

4. How many pieces is the bone in now?
   SELECT ONE OF THE FOLLOWING THREE CHOICES
   A. One piece — Simple.
   B. More than one piece — Comminuted.
   C. Multiple pieces — Severely comminuted.

5. How much is the bone angulated at the fracture?
   GIVE YOUR BEST ESTIMATE BASED ON THE FIGURES BELOW
   10° 30° 60° 90°

6. Does the fracture involve the growth plate of a child or adolescent?

7. What part of the bone is broken?
   SELECT ONE OF THE FOLLOWING FIVE CHOICES
   Fractured near neck.
   Middle one-third.
   Distal one-third.
   Function of proximal and middle thirds.
   Function of middle and distal thirds.

8. What is the general fracture pattern?
   SELECT ONE OF THE FOLLOWING TWO CHOICES
   Type A fracture — Type B fracture.
   Fracture through the head of bone.
   Fracture through the neck of bone.

9. Does the fracture enter a joint?
   If Yes, go to step #11.
   If No, go to step #12.

10. Is the fracture completely nondisplaced?
    If Yes, go to step #14.
    If No, go to step #13.

11. How many joint pieces are broken off?
    SELECT ONE OF THE FOLLOWING THREE CHOICES
    A. One piece — Simple joint.
    B. More than one piece — Comminuted.
    C. Multiple pieces — Severely comminuted.

12. How does the fracture involve the joint?
    SELECT ONE OF THE FOLLOWING FOUR CHOICES
    A. Fracture through the head of bone.
    B. Fracture through the neck of bone.
    C. Fracture through the shaft of bone.
    D. Fracture through the distal end of bone.

13. Roughly estimate the degree of fracture displacement as shown in the diagrams below.
    Select one:

14. Is there any blanching of the skin?
    A. Yes, go to step #16.
    B. No, go to step #15.

15. Once you have addressed these basic questions, then call the orthopaedist.

Smith & Nephew Richards

Smith & Nephew
Leadership in Healthcare Standards

Catherine Pycroft
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5/27/2013
### Commonly used abbreviations

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
</tr>
</thead>
<tbody>
<tr>
<td>#</td>
<td>Fracture</td>
</tr>
<tr>
<td>Ad hoc</td>
<td>Nurse’s clinic (FAH)</td>
</tr>
<tr>
<td>BXOA</td>
<td>Booked x-ray on arrival</td>
</tr>
<tr>
<td>CA</td>
<td>Cancer</td>
</tr>
<tr>
<td>COD</td>
<td>Change of dressing</td>
</tr>
<tr>
<td>COP</td>
<td>Change of plaster</td>
</tr>
<tr>
<td>CT</td>
<td>Computerised Tomography scan</td>
</tr>
<tr>
<td>CTR</td>
<td>Carpal Tunnel Repair</td>
</tr>
<tr>
<td>CTS</td>
<td>Carpal Tunnel Syndrome</td>
</tr>
<tr>
<td>CW</td>
<td>Childrens ward</td>
</tr>
<tr>
<td>D</td>
<td>Discharged</td>
</tr>
<tr>
<td>DNA</td>
<td>Did not attend</td>
</tr>
<tr>
<td>EUA</td>
<td>Examination under anaesthetic</td>
</tr>
<tr>
<td>FSA</td>
<td>First specialist appointment</td>
</tr>
<tr>
<td>FUP</td>
<td>Follow-up</td>
</tr>
<tr>
<td>I &amp; D</td>
<td>Incision and drainage</td>
</tr>
<tr>
<td>L1</td>
<td>First lumbar vertebrae</td>
</tr>
<tr>
<td>MED</td>
<td>Medical ward</td>
</tr>
<tr>
<td>MRI</td>
<td>Magnetic Resonance Imaging</td>
</tr>
<tr>
<td>MUA</td>
<td>Manipulation under anaesthetic</td>
</tr>
<tr>
<td>NBXOA</td>
<td>Non-booked x-ray on arrival</td>
</tr>
<tr>
<td>NOH</td>
<td>Neck of humerus</td>
</tr>
<tr>
<td>NOF</td>
<td>Neck of femur</td>
</tr>
<tr>
<td>OA</td>
<td>Osteo arthritis</td>
</tr>
<tr>
<td>ORT</td>
<td>Orthopaedic ward</td>
</tr>
<tr>
<td>ORIF</td>
<td>Open reduction &amp; internal fixation</td>
</tr>
<tr>
<td>PLA</td>
<td>Plastic surgery outpatients</td>
</tr>
<tr>
<td>POP</td>
<td>Plaster of Paris (plaster cast)</td>
</tr>
<tr>
<td>PXR</td>
<td>Private x-ray</td>
</tr>
<tr>
<td>RA</td>
<td>Rheumatoid arthritis</td>
</tr>
<tr>
<td>R/O</td>
<td>Removal of</td>
</tr>
<tr>
<td>ROP</td>
<td>Removal of Plaster</td>
</tr>
<tr>
<td>ROS</td>
<td>Removal of stitches/sutures</td>
</tr>
<tr>
<td>T1</td>
<td>First thoracic vertebrae</td>
</tr>
<tr>
<td>TA</td>
<td>Achilles Tendon</td>
</tr>
<tr>
<td>THR</td>
<td>Total hip replacement</td>
</tr>
<tr>
<td>TKR</td>
<td>Total knee replacement</td>
</tr>
<tr>
<td>TSR</td>
<td>Total shoulder replacement</td>
</tr>
<tr>
<td>USS</td>
<td>Ultra sound scan</td>
</tr>
<tr>
<td>XR</td>
<td>x-ray</td>
</tr>
</tbody>
</table>
**Glossary of Orthopaedic Terms**

**Abduction**: Movement of an extremity away from the body.

**Adduction**: Movement of an extremity towards the body

**Arthrodesis**: The surgical fusion of a joint. The procedure removes any remaining articular cartilage and positions the adjacent bones to promote bone growth across a joint. A successful fusion eliminates the joint and stops motion. The usual purpose is pain relief or stabilization of an undependable joint.

**Arthroplasty**: Procedure to replace or mobilize a joint, typically performed by removing the arthritic surfaces and replacing them with an implant. Total joint arthroplasty is replacement of both sides of the joint. Hemi-arthroplasty replaces only one side of a joint.

**Arthroscopy**: A form of minimally invasive surgery in which a fibreoptic camera, the arthroscope, is introduced into an area of the body through a small incision.

**Articular cartilage**: A smooth, glistening surface that covers the ends of bones that articulate with each other to form a joint.

**Aspiration**: Removal of fluids from a body cavity; often done to obtain specimens for analysis.

**Avascular necrosis**: A condition in which cells die as a result of inadequate blood supply; see also osteonecrosis.

**Avulsion fracture**: A fracture that occurs when a ligament or tendon pulls off a sliver of the bone.

**Bursa**: A sac formed by two layers of synovial tissue that is located where there is friction between tendon and bone or skin and bone.

**Bursitis**: Inflammation of a bursa.

**Closed reduction**: A procedure to restore normal alignment of a fractured bone or dislocated joint in which the fractured bones are simply manipulated and no incision is needed.

**Comminuted fracture**: A fracture with more than two fragments.

**Compartment syndrome**: A condition that occurs when the amount of swelling and/or bleeding in a muscle compartment causes pressure that is greater than the capillary pressure and results in tissue ischemia and potential tissue necrosis, frequently seen in association with tibial fractures.

**Compound fracture**: Any fracture in which the overlying skin has been penetrated.

**Condyle**: A rounded process at the end of a long bone.

**Delayed union**: A delay in normal fracture healing; not necessarily a pathologic process.
Diaphysis: The shaft of a long bone.

Diastasis: Separation of the distal tibia and fibula

Dislocation: Complete disruption in the normal relationship of two bones forming a joint (ie, no contact of the articular surfaces). The direction of the dislocation is described by the position of the distal bone (eg, with an anterior dislocation of the shoulder, the humerus is displaced anterior to the scapula).

Displaced fracture: A fracture that produces deformity of the limb

Distal: Location in an extremity nearer the free end; location on the trunk farther from the midline or from the point of reference

Distraction: A separation of joint surfaces with no dislocation or ligament rupture.

Dorsal: Toward the posterior surface of the body; eg back of hand

Effusion: The presence of fluid within a joint

Epiphysis: The rounded end of a long bone at the joint.

Equinus: Plantar flexed position of the ankle

Exostosis: A spur or bony overgrowth.

Extension: Movement of an extremity posterior to or behind the body.

External fixation: Stabilization of a fracture or unstable joint by inserting pins into bone proximal and distal to the injury that are then attached to an external frame.

External rotation: Lateral rotation of an extremity relative to the body.

Flexion: Movement of an extremity anterior to or in front of the body.

Fracture: A disruption in the integrity of a bone

Fracture callus: Bone developed after a fracture; initially formed from a hematoma at the bleeding edges of bone, it eventually forms a cartilage mass that is remodelled into mature bone

Fracture-dislocation: A fracture of bone associated with a dislocation of its adjacent joint.

Fusion (arthrodesis): The joining of two bones into a single unit, thereby obliterating motion between the two. May be congenital, traumatic, or surgical.

Galeazzi fracture: Dislocated ulna with a fractured distal radius

Genu (knee): Genu valgum is knock-knee deformity; genu varum is bowleg deformity

Genu varum: Bowlegs
Greenstick fracture: A fracture that disrupts only one side of the bone. This fracture pattern is seen in children because of the greater plasticity of their bones.

Haemarthrosis: A collection of blood within a joint.

Haematoma: A collection of blood resulting from injury

Internal fixation: Surgical insertion of a device that stops motion across a fracture or joint to encourage bony healing or fusion

Internal rotation: Medial rotation of an extremity relative to the body.

Lateral: Lying away from the midline

Malunion: Healing of a fracture in an unacceptable position

Metaphysis: The flare at either end of a long bone.

Monteggia fracture: Dislocation of the radial head in association with an ulnar fracture

Non-union: Failure of a fracture or osteotomy to healing. With continued motion through a non-union, a pseudarthrosis will form

Oblique fracture: A fracture in which the fracture line crosses the bone diagonally

Open reduction and internal fixation (ORIF): A procedure that involves incising the skin and soft tissue to repair a fracture under direct visualization with fixation eg plate and screws, rod

Osteoarthritis (OA): A deterioration of the weight bearing surface; distinguished by destruction of the hyaline cartilage and narrowing at the joint space.

Osteomyelitis: Infection of bone, either bacterial or mycotic

Osteoporosis: Deterioration of bone tissue resulting in an increased risk of fracture as the result of a low-calcium diet.

Osteotomy: cutting of a bone. Used to describe surgical procedures in which bone is cut and realigned

Palmar: The anterior surface of the forearm, wrist, and hand

Pathologic fracture: A fracture caused by a normal load on abnormal bone, which is often weakened by tumour, infection, or metabolic bone disease

Periosteum: A sleeve of connective tissue that surrounds the shaft of the bone and contributes to fracture healing

Physis: The growth plate. Specialized cartilaginous tissue interposed between the metaphysis and epiphysis in long bones in children. Provides growth in length of the bone.
Fracture Clinic and Orthopaedic Outpatients – Student Nurses

Pronation: Flattening of the foot that occurs during walking and running.

Proximal: describing structures that are closer to the trunk

Range of motion (ROM): The amount of movement available at a joint

Shaft: The long, straight, cylindrical mid-portion of a bone

Slipped upper femoral epiphysis (SUFE): A unique fracture of the femoral epiphysis that fractures

Spiral fracture: A fracture caused by a twisting force that results in a helical fracture line

Subluxation: An incomplete disruption in the relationship of two bones forming a joint, ie, a partial dislocation. The joint surfaces retain partial contact.

Torus (buckle) fracture: A paediatric fracture that occurs at the diaphyseal-metaphyseal junction when the diaphyseal cortex is driven into the metaphysis.

Valgus: Angulation of a distal bone away from the midline in relation to its proximal partner. Genu valgum is a knock-knee deformity, with abduction of the tibia in relation to the femur. Can also be used to describe angulation of fractures or bony deformities.

Varus: Angulation of a distal bone toward the midline in relation to its proximal partner. Genu varum is a bowleg deformity, with adduction of the tibia in relation to the femur. Can also be used to describe angulation of fractures or bony deformities.

Volar: Toward the anterior surface of the body. Eg palm side of the forearm

Subluxation: An incomplete disruption in the relationship of two bones forming a joint, ie, a partial dislocation. The joint surfaces retain partial contact.
## Evaluation of your Clinical Preceptor

Please return your evaluation to Julie (CNM)

Name of Preceptor_____________________________________ Date__________

<table>
<thead>
<tr>
<th>My Preceptor</th>
<th>E</th>
<th>VG</th>
<th>S</th>
<th>NI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Was welcoming and expecting me on the first day</td>
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<tr>
<td>Was a good role model and demonstrated safe and competent clinical practice</td>
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<tr>
<td>Was approachable and supportive</td>
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<tr>
<td>Acknowledged my previous life skills and knowledge</td>
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<tr>
<td>Provided me with feedback in relation to my clinical development</td>
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<tr>
<td>Provided me with formal and informal learning opportunities</td>
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<tr>
<td>Applied adult teaching principals when teaching in the clinical environment</td>
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Describe what your preceptor did well

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Describe anything you would like done differently

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

Signed:_________________________ Name:__________________________
Notes

Please use this space for notes.