University Hospitals Sussex
NHS Foundation Trust

Trauma & Orthopaedics Junior Doctors Quick Reference Guide

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Contents

Shift Commitments/Guide:

Useful Information/How To:

RSCH Ward Cover

Location - Trauma Seminar Room L8 Millenium Building
Start Time - 0800
Finish Time - 1700
Handover - Handover to on Call SHO

Roles/Responsibilities:

- Attend the L8 seminar room at 0800.
- Ward consultant of the week will review Hot Rounds.
- Meetings:
    - Monday - All patients on Bluesphere reviewed to ensure plans.
    - Wednesday - Micro Meeting - MDT with micro consultant, will need to prep patient info the day before.
    - Friday - Metalwork meeting - all post op trauma X-rays reviewed from previous week (paeds and hands excluded). Prepper by night team.
- Ward round - led by consultant, all patients seen daily.
- Routine ward jobs completed.
- Update list (T Drive > SWM > T&O Team > RSCH inpatient WR Lists).
- Handover to on-call SHO prior to leaving.

RSCH Weekend Ward Cover

Location - Trauma Seminar Room L8 Millenium Building
Start Time - 0800
Finish Time - 1700
Handover - Handover to on Call SHO

Roles/Responsibilities:

- Attend the L8 seminar room at 0800.
- Weekend ward round consultant will review hot rounds.
- Ward round led by consultant.
- Ward jobs completed.
- Update list (T Drive > SWM > T&O Team > RSCH inpatient WR Lists).
- Handover to on-call SHO prior to leaving.

RSCH On Call Day

Location - Trauma Seminar Room L8 Millenium Building
Start Time - 0800
Finish Time - 2030
Handover - L5 Theatres Office

Roles/Responsibilities:

- Attend morning trauma meeting, take handover from the outgoing night team.
- Meetings:
    - Monday - Relieve night team/drive morning review of bluesphere list.
    - Wednesday - Attend Micro MDT meeting if not busy.
    - Friday - Relieve night team/drive metal work meeting.
- Weekends: Join WR if on call not busy.
- Trauma calls -
    - Attend all Advanced and Code Red Trauma calls.
    - Secondary Survey - responsibility of on-call T&O team for all Advanced and Code Red Trauma. (Should be completed by SpR if not ATLS trained).
- Referrals -
    - Taken by SpR
    - All admissions will need full clerking/drug charts.
    - All patients seen need to be added to bluesphere.
- Wards- Take handover from doctor covering wards at 1700, responsible for all ward patients after this time.
- Handover -
    - 2000 L5 Theatres Office.
    - Handover any outstanding ward jobs, imaging to chase and manual additions to list to night SHO.

RSCH On Call Night

Location - L5 Theatres Office
Start Time - 2000
Finish Time - 0830
Handover - Trauma Seminar Room L8 Millenium Building

Roles/Responsibilities:

- Take handover from day team.
- Trauma calls -
    - Attend all Advanced and Code Red Trauma calls.
    - Secondary Survey - responsibility of on-call T&O team for all Advanced and Code Red Trauma. (Should be completed by SpR if not ATLS trained).
- Referrals -
    - Taken by SpR
    - All admissions will need full clerking/drug charts with acute and chronic medications.
    - All patients seen need to be added to bluesphere.
- Wards- Responsible for all ward patients overnight..
- Admin -
    - All admissions added to ward list - print before morning meeting.
    - Print hot rounds before morning meeting, with any manual additions added.
    - Prepare trauma theatre lists - see list proforma. Ensure patients are ready to go.
    - Thursday - prepare metal work meeting - all patients undergoing trauma surgery in previous 7 days added (excluding hands and paeds).
    - Sunday - Prepare list of all paeds patients seen since Friday - present to paeds team at ~0700.
- Trauma meeting:
    - SpR Will lead presentations of patients from the past 24 hours and cases for theatre that day
    - **Every patient discussed must be documented on Bluesphere.**
    - 0630-0700 - Trauma coordinators arrive
    - 0700-0745 - Paeds team will arrive to discuss any paeds patients seen.
    - 0745-0800 - Theatre teams will attend to discuss theatre cases.
    - 0800-0830 - Ward round consultant will review hot rounds.
    - 0830 - Major trauma meeting - attended by ED, Neurosurgeons, any advanced trauma calls in hot rounds discussed.

PRH On Call Day and Ward Cover

Location - MSK Seminar Room PRH 1st Floor
Start Time - 0800
Finish Time - 2030
Handover - MSK Seminar Room PRH 1st Floor

Roles/Responsibilities:

- Attend seminar room at 0800, morning meeting, print ward list.
- WR with ward consultant - review all patients under care of the orthopaedic team.
- Complete ward jobs and update ward list (T Drive > SWM > Ortho PRH).
- Referrals-
    - Only >60 with radiologically proven Neck of Femur Fractures to be accepted.
    - All other referrals to be directed to SpR on call at RSCH.
- Neck of femur fractures -
    - Need to be clerked using the NOF proforma, must be completed or the trust won't be paid.
    - Must be added to bluesphere and added to next day's theatre list.
    - Prepped for theatre- see 'orthogeriatric guide.'
- Ward Commitments-
    - In hours - PRH patients under T+O.
    - Out of hours - In addition patients under orthogeriatrics and all other surgical patients (limited number of general surgical elective admissions and urology inpatients).
    - Weekends - T+O and orthogeriatrics patients, urology inpatients after 1300, elective general surgical admissions.
- Handover - 2000 to night SHO in MSK seminar room.

RSCH Trauma Theatre

Location - Trauma Seminar Room L8 Millenium Building
Start Time - 0745
Finish Time - 1700

- 0745 attend trauma meeting, cases for day discussed and lists finalised.
- Perform any outstanding jobs for cases of the day.
- Assist operating surgeon in theatre.
- Complete TTOs for any day cases.
- Handover any admissions/post op issues to ward/on call team as appropriate.

PRH NOF List

Location - MSK Seminar Room PRH 1st Floor
Start Time - 0800
Finish Time - 1700

- Attend morning trauma meeting.
- Review patients pre op with consultant +/- SpR.
- Assist in theatre for NOF list +/- afternoon complex arthroplasty list.
- Check in with the ward team to assist with jobs if early finish.

SOTC Theatre List

Location - SOTC Recovery/Pre-OP Holding Area
Start Time - 0800
Finish Time - 1700

- Check which lists are on each day in advance - consultant/SpR rota distributed by Annie Martin.
- Attend list with operating surgeon, assist.
- Complete TTOs for any day cases.
- Handover any issues to PRH on call doctor.

Clinic

Location - Confirm specific location and timings, often RSCH T&O Outpatients

- Check clinic time and availability in advance - consultant/SpR rota distributed by Annie Martin.

Orthogeriatrics Guide

Introduction:

- All patients >60y with a fracture NOF should be moved to Twineham ward, unless polytrauma or on haemodialysis (stay at RSCH)
- No orthogeriatric input on Saturday or Sunday
- Peri-prosthetic fractures remain under the care of orthopaedic team throughout
- Orthogeri's can advise on non-NoF patients and/or review on request if time
- Patients List: T Drive > SWM > Ortho PRH.

Clerking

- Use 'NOF Clerking Booklet' - must be completed in its entirety.
- Complete a proper falls history - preceding events/symptoms, mechanism of fall
- "Mechanical fall" is a pointless term; syncopal vs non-syncopal falls; look for risk factors for falling e.g. meds, OA, beer.
- **Check the AMTS pre-operatively on ALL patients**; it is one of the required criteria for Best Practice Tariff; failure to do this loses £1400.
- Take a full anticoagulation history when prompted in proforma: What anticoagulant? Indication? Dose? Duration of treatment? Lifelong? Important e.g. some patients on life long warfarin for valve replacement or high risk VTE need bridging (heparin infusion). You need to identify this and flag to senior.
- Day 1 post op checklist included in proforma

VTE Prophylaxis

- Complete VTE risk assessment in drug chart
- Enoxaparin 40mg od for 28 days unless:
    - Renal impairment – use unfractionated heparin 5000u tds
    - Weight <50Kg (use 20mg enoxaparin)
    - High K^+ - use fondaparinux if renal function OK
- TEDS: not to be used for #NOFs
- Intermittent pneumatic stockings (Flowtron boots) for patients without enoxaparin or heparin even if for just 1-2 days (e.g. oozy wounds)
- See proforma for guidance on stopping warfarin/DOACs pre-op

Analgesia:

- **Fascia-iliaca block** – ED do for most patients; contact anaesthetic SPR otherwise if needed. NB even if comfortable at rest, may be needed to facilitate nursing care etc
- **Paracetamol** 1g QDS po/iv regularly (500mg if patient weight <50kg)
- **Oramorph** 2.5 - 5mg PRN 4 hourly - don't prescribe regular morphine due to the delirium and falls risks; most don't need.
- Use **Oxycodone** immediate release PRN 1.5mg-2.5mg 4 hourly instead if any delirium, dementia or renal failure
- Do not prescribe codeine, dihydrocodeine, tramadol etc or NSAIDs

Medications:

- **Anti-coagulants**: see guidelines in the proforma, aimed at ensuring as many patients as possible can have early surgery.
- **Parkinson's** medications - continue at correct doses / times including on the morning pre-op
- **Anti-epileptics** - continue at correct dose and time
- **B-blockers** if used for rate control / IHD should be continued (unless bradycardic / heart block)
- **Diuretics** - assess fluid balance status.
- **Aspirin** and **clopidogrel** should be held - if recent cardiac stent, may need to liaise with cardiology re: risks of stopping.
- **ACE-I / ARB** should be held pre-op.

Orthopaedic Trauma - RSCH On Call Guide

Overview:

- Brighton is a major trauma centre.
- Onsite SpR 24 hours a day.
- All patients that are seen must be added to Bluespier including clinical details, contact details if going home and any relevant photography.
- Also responsible for ward patients after 17:00.

Referrals:

- Majority taken by SpR
- As a rule**:**
    - NOF >60 - PRH (some limitations see orthogeriatrics guide)
    - Spines - Spinal surgeons (Via Refer a Patient).
    - Diabetic Feet - Vascular or Medics
    - Lower Limb Cellulitis - Medics
    - Trunk Cellulitis - Medics or Surgeons
    - Head/Thoracic injuries - Surgeons
    - Upper Limb Cellulitis - **Ortho**
    - Groin Abscess - Surgeons
    - Limb Abscess - **Ortho**
- External Referrals - **Exclusively Through SpR**
    - Pelvic/Acetabular
    - Major trauma
    - Open Fractures
    - Paediatric Tertiary
    - Complex Trauma

Specific Conditions:

Compartment Syndrome:

Why this is an emergency:

- Limb threatening condition requiring urgent surgical intervention.

Common features:

- Seen either in the immediate 24 hours after the injury or after surgical treatment.
- Most commonly seen with long bone fractures (tibia).
- Can occur in all limbs – including feet and arms.
- Pain out of proportion with injury, think the post OP tibial Ex-Fix with increasing opiate requirements.

What do I need to do?

- **Contact registrar urgently.**
- Keep patient NBM.
- Ensure patient prepared for theatre – Group & Save, IV fluids etc.
- Follow BOAST guidelines.
- Remove circumferential dressings to skin and elevate limb.
- Single use pressure monitors in the ‘trauma bunker’ in theatres.

Pitfalls?

- ‘It’s an open fracture so the compartments are already decompressed’.
- Unconscious patients.
- Long lie/pressure injuries/High pressure injection injuries.

Fracture Dislocations:

Why this is an emergency:

- Early reduction helps reduce swelling and protects soft tissues
- Avoids exacerbating any joint damage that has occurred
- Can be associated with neurovascular injuries
- Potentially limb threatening injuries

Common features:

- Commonly due to high energy trauma – e.g. fall down stairs, fall from height etc.
- Can be open or closed injuries - closed injuries can become open injuries if not dealt with appropriately

What do I need to do?

- A&E should plan to reduce such injuries and immobilise them – e.g. backslabs. All patients need repeat XRs after manipulations.
- Check neurovascular status of injured limb – specific pulses and nerves! Before and after manipulation or application of casts.
- Check for other injuries - e.g. knees, hips, back

Common pitfalls?

- 'It's too bad to manipulate and just needs to go to theatres anyway'
- Missed dislocations - posterior shoulder, perilunate etc.

Open Fractures

Why this is an emergency:

- Associated with high rates of infection when inappropriately treated
- Risk of neurovascular compromise
- Potentially limb threatening injury

Common features:

- Commonly due to high energy trauma – e.g. fall down stairs, fall from height etc.
- Any wounds over a fracture should be considered an open fracture.

What do I need to do?

- Follow BOAST guidelines
- Ensure antibiotics are prescribed – follow latest Mircobiology guidelines
- Check tetanus status and give tetanus immunoglobulin if needed – Tetanus Guidance (page 12)

Common pitfalls?

- 'I can't see the bone so it's probably not an open fracture'
- Patients in plaster from 'St Elsewhere' with no clear documentation of open vs closed injuries, check what lies beneath the plaster.

Total Hip Dislocations

Why this is an emergency:

- Risk of injury to sciatic nerve
- Early reduction of dislocation will always be easier than delayed reductions

Common features:

- Patients may have had recurrent previous dislocations
- May have had revision hip replacements

What do I need to do?

- Check status of Sciatic and Femoral nerves – document motor and sensory function in clerking
- Check distal pulses – and document
- Keep patient NBM
- 1st dislocation = theatres. 2nd+ dislocation = ED is ok if suitable.

Pitfalls?

- Fractures/Difficult reductions.

Long Bone Fractures

Why this is an emergency:

- Sick patients
- Risk of significant blood loss
- Risk of compartment syndrome

Common features:

- Commonly due to high energy trauma – e.g. RTA, fall down stairs, fall from height etc.

What do I need to do?

- Check and document neurovascular status.
- Check for compartment syndrome - each compartment needs to be clinically examined in turn – and documented.
- Adequately immobilise affected limb (traction or plaster) – Accident & Emergency should do this – again get a check XR after any cast applied.

Pitfalls?

- Open fractures not spotted before plaster applied.
- Sick patients with other injuries - Polytrauma.
- Compartment syndrome.

Septic Arthritis

Why this is an emergency:

- Septic arthritis can destroy a joint's articular surface within 24 hours.
- Patients can become septic from septic arthritis.

Common features:

- Preceding minor skin trauma – e.g. insect bite, thorn injury etc. Or recent illness – e.g. CAP, UTI, diarrhoea, STI etc.
- Reduced range of motion in affected joint – including avoidance of weight bearing on affected limb.
- Red, hot swollen joint.
- Differential diagnoses – crystal arthropathy, prepatella bursitis (knees), transient synovitis in children, inflammatory arthropathies.

What do I need to do?

- Arrange XRs of affected joint
- Bloods – FBC, CRP (include ESR in children)
- DO NOT START ANTIBIOTICS – unless the patient is septic or an aspirate of the affected joint has been performed

Pitfalls?

- Starting antibiotics before aspiration/blood cultures unless the patient is septic in which case at least a blood culture should be done.
- Aspiration through cellulitis
- Do not aspirate an artificial joint in A&E

Bleeps:

To Bleep - Dial ‘26’ then desired bleep then phone number.

Ortho SpR - 8629

Ortho SHO - 8471

Ortho Ward Bleep - 8249 / 8251

PRH SHO Bleep - 8060

For all other bleeps/contacts see ‘Induction App’.

Apps:

Induction:

- Directory of bleeps / phone extensions for RSCH/PRH

Pando:

- Allows clinical photographs to be taken and securely stored.
- Approved by NHSx.
- Can be sent via NHS email
- Good for documenting open #s etc.

Microguide:

- BSUH Microguide contains all local guidelines both clinical and prescribing.
- Not just limited to antimicrobial guidance as in most trusts.
- Accessible via app and web page.

Useful Websites:

Virtual Fracture Clinic - A&E and acute injury guideline:

- List of all common orthopaedic injuries and their acute management.
- All guidance is trust specific.
- Some information out of date - specifically spinal injuries go to the spinal team not orthopaedics.
- A&E Acute Orthopaedic Guidelines · Virtual Fracture Clinic

Orthobullets:

- Online encyclopaedia of trauma and orthopaedics.
- Very extensive and well beyond the knowledge required for SHOs.
- Orthobullets

BOAST Guidelines:

- British Orthopaedic Association Standards for Trauma and Orthopaedics.
- Short standards documents that are trauma-related and produced by the BOA's Trauma Committee.
- BOAST Guidelines

Ordering Imaging:

ED Patients:

X Ray:

- Print and sign request from symphony - or ask a friendly ED SHO.
- Either take patient to Level 5 X-ray with form or leave in ‘blue box’ at ED nurses station and inform nursing staff.

CT:

- Print and sign symphony request.
- Deliver to CT radiographer.
- Contact on call radiologist to vet request.

Ward Patients:

X Ray:

- Complete digital request on Bamboo/Panda.
- If urgent phone level 5 X Ray to chase.
- For best results take patient down yourself.

CT:

- Complete digital request on Bamboo/Panda.
- Phone on call radiologist to vet request.
- If urgent phone CT to chase/get slots.
- Again if urgent take the patient down yourself.

MRI

- Complete digital request on Bamboo/Panda.
- Phone on call radiologist to vet request.