

RMO ORTHOPAEDICS HANDBOOK

Last modified: 25/08/2021

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WELCOME FROM THE MEU

The Medical Education Unit would like to welcome you to this rotation. Please read this handbook in conjunction with the RMO Orientation Handbook which is accessible on the MEU website via Zenworks or <http://mededu.matereducation.qld.edu.au/handbooks/>

MEU contact details

If you're experiencing difficulty with any aspect of the term, clinical or otherwise, please contact the term supervisor and/or PVMEO as early as possible.

Director of Clinical Training (DCT)	ext. 8229
Prevocational Medical Education Officer (PVMEO)	ext. 8431
Vocational Training Medical Education Officer (VTMEO)	ext. 1560
Medical Education Admin Officer	ext. 8272
Medical Education Manager	ext. 8114

INTRODUCTION

The Mater Adult Hospital Orthopaedic Department deals with low energy trauma (e.g. wrist, ankle and fractures of the neck of femur) and elective upper & lower limb surgery where a full range of procedures are undertaken. These include primary and revision joint arthroplasty, sports injury reconstruction, and foot & ankle surgery. On average the department caseload varies between 10 and 20 patients at any given time.

UNIT OVERVIEW

Unit Director

Dr John Radovanovic

Lower limb surgery including joint replacement and knee reconstruction

Term supervisors

Dr John Radovanovic

Dr Anubhav Sathu

Lower limb surgery including joint replacement and knee, foot and ankle

Consultants

Dr Anthony O'Neill

Knee, shoulder & Sports Medicine

Dr Ali Kalhor

Shoulder surgery

Dr Ben Forster

Foot, knee and ankle

Dr Bjorn Smith

Lower limb surgery including joint replacement and knee

Dr David Bade

Lower limb surgery including joint replacement and knee

Dr John Walsh

Foot and Ankle

Dr John Roe

Sports Medicine and Knee Arthroplasty

Dr Liam Johnson

Lower limb surgery including joint replacement

Dr Michael Lutz

Foot and Ankle

Dr Owen Jenkins

Lower limb surgery including joint replacement and knee, foot and ankle

Dr Simon Journeaux

Lower limb surgery including joint replacement and knee

Dr Tim McMeniman

Knee & Sports Medicine

Fellowships

Sports Medicine Fellow x 2

Foot and Ankle Fellow x1

Other

2 Training Registrars

4 PHOs

2 Residents

1 Clinical Nurse Consultant (Lynne Glover)

Contact Details - Orthopaedic Ward (8A)

Phone 8918 / 8968

NUM Marie Graham 8463

CNC Jamie Want 8463

Day surgery (8B) 8701 (8324 for clerical staff in day surgery)

Operating theatres 8616 / 8534 (8434 for OT team leader)

Theatre bookings 8466 / 8244 (booking regular list 24 hours plus)

Mission Control (Theatre A/H) 1875

Booking II / Radiology 8182 (book II (image intensifier) early)

RMO LEARNING OBJECTIVES

Clinical management

Common problems and conditions:

Falls, especially in the elderly

Limb Ischaemia

Bone Health

Injury

Minor Trauma

Discharge medications

Joint Disorders

Multiple Trauma

Delirium recognition/management

Leg Ulcers

Post-operative Care

Radiation safety

Infection control

Fluid, Electrolyte and Blood Product Management

Skills and Procedures:

Administration of local anaesthesia

Surgical knots and simple wound suturing Suture removal

Splitting of plaster casts and back slabs for neurovascular compromise

Bladder catheterisation

Primary and secondary surveys

Recognition of compartment syndrome

You should assist in theatre with at least:

- 5 joint replacements
- 5 fracture fixations

You should be able to diagnose and manage:

- Common orthopaedic disorders, both traumatic and non-traumatic
- Post-operative complications
- Medical management of orthopaedic patients
- Application and removal of plasters & their aftercare

You should know the management of:

- Compartment syndrome
- Fat embolism
- Pulmonary embolism
- Deep vein thrombosis

You should:

- Be able to interpret plain x-rays of limbs and the axial skeleton
- Have a simple understanding of bone scan, CT scan and MRI
- The haematological and microbiological aspects of orthopaedics
- Understand when to involve other specialty input (e.g. infectious disease, general medicine)

RMO DUTIES & RESPONSIBILITIES

General

Primary care of the patient is undertaken by the resident, with the guidance and assistance of the registrar and under the supervision of the consultant. A close working relationship with the nursing and allied health staff should be established. The resident is responsible for his or her own unit patients in the ward.

Reporting lines

The RMO reports directly to the registrar of the Unit – if unavailable (e.g. away on sick leave), report to the relieving or on call registrar. If they are also unavailable, please contact the relevant Consultant or failing that the Orthopaedic Director.

Residents should inform the Support Officer and Service Manager for the area if they are away unwell, so they can inform the broader team.

Daily primary care

This includes all patients in the resident's unit. A daily ward round is to be performed, usually accompanied by the registrar and the multi-disciplinary team. A further review in the late afternoon may be required, especially for post-operative patients.

Daily record

A daily chart entry with documentation of findings and management decisions as per hospital guidelines is essential. It should be headed "RMO WR" or "Reg / RMO WR" or "Cons/RMO WR" depending on who does the ward round. There is a resident stamp.

Clear and concise documentation should be aimed for at all times and must reflect cause and effect. This assists the coding staff with reimbursement of DRG revenue and for medico legal reasons. Refer to Mater Document Centre policy on Clinical Coding for more information.

Discharge Planning

Patient will have a colour code and a discharge date on the patient journey board.

- GREEN discharge today.
- YELLOW discharge tomorrow.
- RED discharge 2-7 days.
- BLUE – bed block e.g. waiting for a rehab bed.

All patients who have a yellow code need to be prepared for discharge the day prior. Discharge meds and any paperwork need to be completed.

Discharge time is 10:00 hours and all transport (ambulance) is booked for 10.

All patients being transferred to another health care facility (nursing home, TCP, St Vincent's rehab, another hospital etc.) must have a medical discharge summary completed.]

Discharge summary template

1. Principle Diagnosis (*This is what the GPs want to know*)

E.g. Left Total Knee Replacement for Osteoarthritis.

Standard post-operative course in hospital

Weight bear as tolerated

E.g. Left Hemiarthroplasty for Neck of Femur fracture.

Post op course complicated by UTI requiring Antibiotics

Weight bear as tolerated

2. Secondary issues (*This is for the coders*)

E.g. Constipation treated with aperients

E.g. Hypokalaemia treated with IV Infusion

GP Follow up (what you want the GPs to do)

E.g. wound review at 2/52 post op for removal of staples

E.g. check iron levels at 3/12

Orthopaedic follow up (when are they going to see us; include any specific post op plan)

E.g. Post-operative review 2/52 post op; change to Range of Motion brace - 0 to 90degrees till 6/52

It is important that the discharge summary is clear and concise and avoids abbreviations

ADMISSION CLERKING

This includes all acute and routine admissions in-hours and should be in the form of a standard history and examination. In particular it should include:

- Allergies, contraindications and sensitivities, especially to antibiotics, NSAIDs, anticoagulants, skin preps and adhesives,
- State of the skin of the affected limb, in terms of risk of infection - look specifically for ulceration / insect bites and grazes), and
- Neurovascular state, especially distal to the affected part.
- Delirium baseline

All findings should be documented and relevant findings of concern flagged. Let the relevant Registrar know.

Appropriate investigations should be ordered. These include:

- X-rays of the affected part. X-rays should usually be repeated if they are more than 6 months old, unless complex (e.g. CT or MRI) Shorthand notation for common operations are:
 - THR - AP pelvis XR centred on the pubic symphysis with template marker (past 12 months)
 - TKR - AP standing, lateral & skyline views of knee +/- long leg alignment films (past 12 months)
 - HTO (high tibial osteotomy) - long leg alignment x-ray (weight bearing) (past 6 months)
- Group and hold / cross-match. The blood tariff for common operations is:
 - THR - Group & hold (4 units for revision)
 - TKR - Group & hold
 - # NOF - Group & hold

- HTO - Group & hold

If image intensifier films have been taken in theatre there is no necessity to order post op x-rays unless a long bone fracture has been nailed. Often the Registrar will request it.

If there is anything you are not sure about please ask the Registrar / or Orthopaedic Nursing staff.

Consultant Ward Rounds

The resident should familiarise themselves with the patient's condition and progress, and ensure appropriate x-rays and investigation results are available. After the round, they should transcribe the ward round findings and decisions into the chart ensuring that it is noted what the finding is, why it occurred and what the treatment was.

Ward Work

The resident should attend to all ward paperwork promptly, especially in the morning before leaving the ward for outpatients or theatre, to prevent treatment or discharge delays. If you go off the ward for a prolonged period (e.g. to Theatre or Outpatients), then please let the nurse in charge know.

At the completion of each shift, all patients should be appropriately handed over to after-hours medical staff. Adequate patient handover is critical for ensuring timely patient review and ensuring patient safety, and is a prime responsibility of all medical staff.

Shared

This protocol is available on the desk at all phones – it is a protocol for communicating with and providing medical information to your supervisor.

Competencies

During the first half of your Ortho rotation, you are to complete the following competencies:

- Splitting, Adapting, Removing a plaster cast
- Urinary Catheterisation
- Pharmacology
- Code Green (via MOVES)

The first 3 are available on the intranet – go to the homepage, departments, orthopaedics.

The 4th is available via MOVES – intranet homepage, departments, Mater Education Centre, MOVES.

Consent Forms

Routine & emergency admissions

Residents are **not permitted** to consent patients for surgery. It is not your responsibility to complete the consent form but it is prudent to check that your patients have an appropriate consent form filled out prior to theatre and call the relevant Registrar/Consultant if there is a problem. Most of the consent forms for elective patients will have been completed in OPD and are valid for 12 months from the day they have been signed.

Day surgery

Patients undergoing day case procedures are admitted to the Day Surgery unit on the morning of the procedure. The resident should visit the Day Surgery unit by 8:00 on the morning of theatre and check to see if any investigations are required (e.g., up to date x-rays).

OUTPATIENTS

Residents should attend outpatients where possible. Assistance with arranging admissions and investigations and provision of certificates is required, as is seeing patients. These sessions are an invaluable educational opportunity.

This is a particular opportunity for teaching of orthopaedic examination, as well as basic orthopaedic principles. Residents should learn to apply plasters in fracture clinic. The residents are responsible for organising x-ray requests for fracture clinic prior to the session to avoid delays in clinic flow. The Registrar/PHO will organise x-rays for the Consultant clinics.

Pre-operative Admissions

Most patients for elective surgery will be seen in pre-admission after their clinic consultation or at a designated time prior to surgery. Follow up POMS and Anaesthetic appointments occur after this. 2 weeks prior to surgery the CNC follows up all major cases to ensure that pre/post-operative arrangements are in place.

Residents will be asked to arrange POMs referrals, where required, x-rays, blood forms, iron infusions and antibiotics to treat Urinary Tract Infections/positive urine tests.

OPERATING THEATRE

Aseptic technique as well as basic operative technique is taught. Residents can expect to suture wounds and perform the simple orthopaedic operations under supervision.

Pre-operative tests – these are VITAL

X-rays must be requested and sighted before theatre. Appropriate 'group and hold' and 'cross match' must be available for theatre.

Every patient undergoing major surgery pre-op

- FBC, ELFTs, Coags, Chem20
- CXR- AP and lateral
- ECG
- NBM- Morning list – from midnight; afternoon list – from early morning
- Large joints / big ops – Blood as per tariff
- IVC and fluids

Operating list

Generally the Registrars will organise the order of lists with the procedural scheduler (with the oversight of the Service Manager) and any special equipment requirements with the theatre CN. You may be requested to book a patient on a trauma list or for an emergency list.

Attendance and assistance in theatre

Your assistance in theatre is to be encouraged and in some cases may be essential. Where the registrar is not in attendance it would be good practice to ensure that all the relevant investigations/pre-op tests/ consent and limb marking have been performed. The resident is required to assist at operation and ensure notes and orders are written up (if the registrar is not there), including:

- An account of the procedure and post-operative orders. (Check with operating surgeon).
- Post-operative antibiotics and anticoagulants.
- Check x-ray and blood tests if required.
- Fluids and analgesia.
- Take home medication

At all times, one resident must be covering the ward (either on the ward, or in outpatients); two residents should not be in theatre at the same time.

Post Op Day 1

X-ray limb

FBC, ELFTs

NV Obs (please do not write NVI; document if the tibial, deep personal, radial nerve etc are intact)

Pain

Post op antibiotics 24hrs

DVT prophylaxis as per operation note

Weight bearing status as per operation note

Chest clear and / or signs of fluid retention

Calves soft and non-tender

Fracture Clinic

History: Age, injury, date of injury, mechanism of injury, right / left hand dominance, pain / numbness / tingling, treatment and functionality

SUPERVISION

Term supervisors

Dr John Radovanovic

Dr Anubhav Sathu

SCOPE OF PRACTICE

As an intern, you are not permitted to perform any clinical procedure without direct observation, at least in the first instance. Your clinical supervisor will then inform you what is to happen in future, with regard to

whether or not direct supervision is required. This will be dependent on the skill itself and level of proficiency demonstrated.

ASSESSMENT AND FEEDBACK

Assessment

It is the responsibility of the RMOs to seek a mid-term and end-of-term assessment with their term supervisor. If you're experiencing difficulty with any aspect of the term, clinical or otherwise, please contact the term supervisor and/or medical education, early. The MEU will send out a reminder email with instructions to all RMOs one week prior to all due dates. The assessment form can be accessed at any time from the Medical Education Unit website via Zenworks or <http://mededu.matereducation.qld.edu.au/cpd-requirements/all-forms/>

There is also an optional self-assessment section located at the beginning of the assessment form, which you are encouraged to complete and discuss with your supervisor. However if you wish to complete this separately you can complete the RMO form Self-Assessment Form which is located on the Medical Education Unit Website under 'Assessment Forms'.

Feedback

Your clinical supervisor/s will provide regular written feedback regarding your progress via your assessment forms, and verbal feedback on a daily basis. If you have concerns or would like more regular feedback, speak to your supervisor in the first instance and the MEU if required. At the end of your rotation, you are required to complete the end-of-term unit evaluation survey and provide valuable feedback on your supervision.

For more information regarding assessment and feedback, please refer to the RMO Orientation Handbook.

UNIT ORIENTATION

Your clinical supervisor/s (and term supervisor when available) - in conjunction with a senior nurse and/or registrar as available, will conduct a face-to-face unit orientation with you on the first 2 days of the term. The following areas will be covered:

- reporting lines,
- daily roster,
- unit policies and procedures,
- term learning objectives,
- discussion and documentation of your individual learning objectives for the term (see the 'term learning plan' below),
- assessment,
- handover with the previous junior doctor,
- how daily clinical handover is conducted ,and
- miscellaneous (tour of the department, introductions to staff)

Start of Term Checklist

All RMOs complete the Start of Term Checklist with their Term Supervisor within the first week of a new term. The checklist is completed online and the link is available on the Medical Education Unit website (<http://mededu.matereducation.qld.edu.au/cpd-requirements/all-forms/>).

UNIT POLICIES & PROCEDURES

Mater Policies and Procedures

Mater policies and procedures are located on the Mater Document Centre, which can be accessed via Zenworks or the Mater Intranet.

Clinical Policies

Drugs – Adults

Cefazolin 2gm on induction and 3 post op doses (1-2g) post TKR, THR, etc.

DVT prophylaxis (Currently the Mater is using Aspirin as part of the randomisation for the CRISTAL Study for VTE prophylaxis following arthroplasty)

Anti-embolic stockings/ Foot Pumps

- All the ortho consultants use foot pumps:
- Dr McMeniman: Short TEDS. To go to theatre with TED on non-operative leg. Other TED to be applied post – op. Foot pumps for joint surgery to be applied on the ward on return from theatre.
- Dr Journeaux – No TEDS. Foot pumps for joint surgery to be applied on the ward on return from theatre.
- All # NOFs- to have short TEDS and foot pumps to be applied on the ward on return from theatre.
- Dr Forster: Nil stocking required unless specified by surgeon.
- Dr Roe: Thigh high TEDs to be applied in theatre post-operatively

IV antibiotics

- All other surgeons (if surgery requires antibiotics): for 24 hrs post op.

Vancomycin (Glycopeptide)

1. Usually pre-level only required
2. 1 ½ hours before dose
3. Ongoing pre-dose checks every 3 days (unless pt compromised)

Patient variables (for both drugs)

1. Age

2. Sex
3. Weight
4. Renal Function

Signs and symptoms for both drugs

- Ototoxicity – auditory dysfunction, tinnitus and vertigo
- Nephrotoxicity – decrease/change in urinary output, change in U&E (BUN, Cr)
- “Red-Neck Syndrome” – drop in BP, fever, chills and maculopapular rash (vancomycin only)
- Monitor use of other nephrotoxic drugs e.g. lasix
- Please document commencement time of every infusion on medication sheet. Blood slips should include – current dose, how many doses given and times
- Recommended times – od = 2200 hours. Bd = 1000hours and 2200 hours
- TAS – Therapeutic Advisory Service-pager

Outpatients who should attend Anaesthetic clinic

- All patients with incapacitating systemic disease that is a constant threat to life
- All patients for major joint replacements – hips, knee
- All patients for major vascular surgery, e.g. aortic aneurysm repairs
- All patients for plastic, general surgery, urology, gynaecology etc. for major surgery who may require admission to intensive care postoperatively
- All patients with previous anaesthetic problems, e.g. difficult intubation

UNIT EDUCATION & TRAINING OPPORTUNITIES

Meetings

Daily	Monday to Friday in the Registrar Room @ 7.20 am. Attended by Reg/PHO
Monday	Teaching ward round, NOF round 12.30 pm
Tuesday	MDT @ 12 pm 8A. POM consultant # NOF round 1.30 pm
Thursday	Department meeting – MAH Conference room 4 Level 3 @ 7.30 am. POM consultant # NOF round 1.30 pm
Friday	NOF Round 12.30 pm

RMO Education

Tuesday	12.30 -1.30pm: Protected teaching time for all RMOs (interns, JHOs and SHOs)
Thursday	12.30 -1.30pm: Protected teaching time for all RMOs (interns, JHOs and SHOs)
Friday	12.30 -1.30pm: Practice Improvement Program (PIP) – interns only

RMO UNIT ROSTER & TIMETABLE

Ward work must be under control before attendance at fracture clinic can occur. If there is any issue with this, please contact your registrar in the first instance, or Dr Radovanovic.

Daily Timetable	Time And Activity
MONDAY	AM: Ward PM: Clinic
TUESDAY	AM: Ward/ Clinic 7.30 am – Radiology Teaching once a month 12.30 pm – 1.30pm: Medical Education Session – Protected Teaching Time [all RMOs] – Duncombe Building, level 4. PM: Ward
WEDNESDAY	AM: Ward/ Clinic PM: Ward
THURSDAY	7.30 am Departmental meeting AM: Ward 12.30 pm – 1.30pm: Medical Education Session – Protected Teaching Time [all RMOs] – Duncombe Building, level 4. PM: Ward
FRIDAY	AM: Ward 12.30 pm – 1.30 pm: PIP – Protected Teaching Time [interns only] – Duncombe Building, level 4, MMSS. PM: Ward

ROSTERED HOURS AND FATIGUE

Regular rostered hours are from 7.30 am – 4.30 pm with a one hour lunch break. Discuss your rostered hours with your Term Supervisor.

“You do not start work prior to your rostered hours because a Registrar wishes to do a ward round.”

ALL Medical staff will be required to complete their time sheets accurately and to note clearly where the service was provided. If time split has occurred with other hospitals or other parts of the Mater complex, this should also be clearly noted on the time sheet.

ANY UNROSTERED OVERTIME needs to be entered into your timecard with UR numbers of patients displayed. In accordance with the RMO Award Section 4.3, payment of unrostered overtime.

FATIGUE

If an RMO is recalled and put into fatigue (less than a 10-hour break between shifts), the RMO must notify the on-call consultant via text message. The fatigue rules apply to all medical staff, and only a Director of Department can override this under exceptional circumstances.

APPENDIX 1: RISKS ASSOCIATED WITH ANAESTHESIA & SURGERY

Goals of the pre-operative visit

- Assess appropriateness of patient and of procedure for the facility e.g. day surgery, endoscopy suite, diagnostic imaging department, operating theatres.
- Obtain medical information needed to plan the appropriate type of anaesthetic e.g. general anaesthesia, local analgesia, intravenous sedation.
- Assess factors that affect the risk of anaesthesia
- Obtain informed consent
- Assess the patient's social situation with respect to Day Surgery, 24 hour ward etc.
- Provide education to the patient (e.g. nil to eat or drink pre-operatively and when and which medications to take or discontinue.)
- Acquaint patient with Intensive Care Unit, Day Surgery, MRI facility etc.
- Diminish patient's anxieties
- Provide patient with clear expectations for anaesthetic and post-operative course e.g. continuous epidural or PCA for post-operative pain relief (clinical path if appropriate).

Pre-anaesthetic interview

- Age of Patient
- Scheduled procedure & its date
- Medications, current medications & dosage, last dose and prior medications e.g.. steroids and chemotherapy
- Allergies, including specific reactions
- Cigarettes, alcohol and recreational drug history, including most recent use
- Anaesthetic history, including specific details of any problems
- Previous surgical procedures & hospitalisations
- Family history, especially of anaesthetic problems
- Social history, especially with regard to home circumstances and post-operative care giver
- Birth and developmental history (paediatrics)
- Obstetrical history, last menstrual period (females)
- Medical problems previously diagnosed: evaluation, treatment and degree of control
- Review of systems, looking for signs or symptoms of undiagnosed medical problems, particularly cardiac, pulmonary or neurological disease, reflux or bleeding tendency
- Exercise tolerance
- History of airway problems (history of difficult intubation or airway disease, symptoms of temporomandibular joint disease, snoring or stridor, loose teeth, stiff neck)
- Patient concerns, preferences and expectations regarding anaesthesia.

Pre-operative questions

- What operation are you having?
- Do you have any medical problems other than the condition for which you are having surgery?
- Do you feel ill/sick now?
- Have you ever had a problem with your heart, such as chest pain, palpitations or a heart attack?
- How much physical activity can you do?
- Do you get short of breath during normal daily activities?
- Do you have any problems with your blood pressure?
- Do you smoke or drink alcohol?
- Do you use any non-prescription drugs or other tablets or medicines?
- Have you ever had bronchitis, pneumonia or asthma?
- Do you ever wear dentures, glasses or contact lenses?
- Do you have any symptoms suggestive of sleep apnoea; do you snore, or stop breathing when you sleep?
- Do you have any neurological problems, such as convulsions, severe headaches or memory loss?
- Have you had a cold or cough recently?
- Have you ever had any jaundice or problem with your liver?
- Do you have reflux, a hiatus hernia or gastritis?
- Have you ever had a problem with your kidneys?
- Do you have problems with your thyroid or adrenal glands?
- Do you bleed easily or have any problems with blood clotting?
- Have you ever had a blood transfusion? Are you happy to have a blood transfusion if necessary (Autologous blood collection)
- Do you take any medications regularly? Have you taken any other medications in the last year?
- Have you ever had an operation?
- Was there any problem with the anaesthetic that you know of?
- Have you or anyone in your family ever had a problem with an anaesthetic?
- Are you allergic to any medications? To anything?
- Is there anything else about your health that you think I should know?
- Menstruating females: when was your last menstrual period? Could you possibly be pregnant? Do you use any birth control?
- Parents of paediatric patients: Was your child premature or delivered at term? Did your child have any neonatal complications? Is there any history of bradycardia or a history of Sudden Infant Death Syndrome in your family?

Pre-operative physical examination

- Height & Weight
- Baseline mental status
- Vital signs, blood pressure, heart rate, respiratory rate, temperature, oxygen saturation
- Airway evaluation of heart & lungs
- Skin condition, turgor, jaundice, pallor
- Landmarks for regional techniques
- Neurological function
- Vascular access
- Extremities, clubbing, oedema, pulses

Pre-operative evaluation of the airway

- Mallampati classification (ability to view posterior pharynx (Classes 1, 2, & 3))
- Mentum to thyroid distance
- Mandible to hyoid bone distance
- Oral opening
- Nares
- Quality of dentition (teeth, gums, dentures)
- Intraoral structures (tonsils, uvula, palate)
- Mask fit (facial anatomy, moustache, beard)
- Range of neck movements
- Obesity

Logistics of pre-operative evaluation - alternative strategies

- No evaluation until day of surgery
- Telephone screening
- Screening by registered nurse with referral to anaesthetist when/if needed
- Written health questionnaire
- Computer aided survey e.g. Health Quiz Prescreen
- Rely on surgeons to screen & refer
- Require patient to visit general practitioner
- Pre-operative visit to surgeon/anaesthetist at pre-admission clinic
- Pre-operative visit to anaesthetist in anaesthetic pre-operative assessment clinic

APPENDIX 2: ADVANTAGES & DISADVANTAGES OF METHODS OF PRE-ANAESTHETIC EVALUATION

	ADVANTAGES	DISADVANTAGES
PRE-ANAESTHETIC CLINIC	<ul style="list-style-type: none"> Comprehensive evaluation is possible Ready accessibility of consultation & laboratory tests Patient's questions can be answered directly Anaesthetist may obtain informed consent Can give prescription for pre-operative medications 	<ul style="list-style-type: none"> Patient may still not meet the anaesthetist who will anaesthetise him/her Requires an extra trip to the hospital Time-consuming for the patient Usually not reimbursed by health insurer May not decrease patient anxiety
TELEPHONE INTERVIEW	<ul style="list-style-type: none"> Save patient an extra trip to hospital Patient has opportunity to speak to the anaesthetist Patient's questions can be answered directly 	<ul style="list-style-type: none"> Time consuming & often frustrating for interviewer Low contact rate Physical examination not possible

APPENDIX 3: GUIDELINES FOR PRE-OPERATIVE CARE

Prepared by the Australian & New Zealand College of Anaesthetists to set expected minimum standard of care. These standards apply to all patients who receive anaesthesia or monitored care. If a patient is not seen pre-operatively, e.g. in an emergency situation, it should be documented in the patient's record. If the history is supplied by a third party because patient is unable to do so e.g. unconsciousness or dementia, this should be documented.

The anaesthetist is responsible for:

- Determining the medical status of the patient
- Developing a plan of anaesthetic care
- Acquainting the patient or the adult responsible for the patient with the proposed plan
- Documenting this history, examination results and consultations, and plan in the patient's record

APPENDIX 4: GUIDELINES FOR LABORATORY TESTING

TEST	INDICATORS
Haemoglobin	History of malignancy, congenital heart disease, chronic disease especially renal, age over 70 if pale
WBC	Suspected infection or immuno-suppression
Platelet Count	History of abnormal bleeding or bruising, liver disease, blood dyscrasias, chemotherapy, hypersplenism
Coagulation Studies	History of abnormal bleeding, anticoagulant drug therapy, liver disease, malabsorption, poor nutritional state
Electrolytes, blood glucose, BUN/Creatinine	Hypertension, diabetes, heart disease, diseases with fluid/electrolyte abnormalities. Patients on digoxin, diuretics, steroids or ACE-inhibitors
Liver Function Tests	Liver disease, exposure to hepatitis, alcohol or drug abuse history, drug therapy with drugs affecting liver function
Pregnancy Test	Females of child bearing age when pregnancy cannot be ruled out by history
Urinalysis	Not indicated routinely. With history of UTI's and before prosthetic implants
ECG	Males and Females over the age of 75 yrs with a history of the following: cardiac disease, hypertension, diabetes, morbid obesity, significant pulmonary disease, cocaine abuse
CXR	Pulmonary disease, airway obstruction, cardiac disease, malignancy, history heavy smoking, age over 75
Cervical Spine X-ray	Rheumatoid arthritis, Down's Syndrome, Severe Osteoarthritis

APPENDIX 5: INDICATIONS FOR REFERRAL TO CARDIOLOGIST/PHYSICIAN

- Recent myocardial infarction (within 6 months)
- Unstable angina
- Uncontrolled severe hypertension, diabetes, chronic obstructive pulmonary disease, significant renal or liver disease
- Significant and symptomatic cardiac dysrhythmia
- Exercise intolerance without obvious cause
- Recent abnormal ECG changes suggesting of IHD
- Congestive cardiac failure
- Bleeding disorders (e.g. haemophilia)
- Haemoglobinopathies (e.g. thalassaemia)

APPENDIX 6: AMERICAN SOCIETY OF ANAESTHESIOLOGISTS PHYSICAL STATUS

Status	Description
1	A normal healthy patient
2	A patient with mild systemic disease
3	A patient with severe systemic disease that limits activity, but is not incapacitating
4	A patient with incapacitating systemic disease that is a constant threat to life
5	A moribund patient not expected to survive 24 hours with or without operation

In an emergency the letter "E" may be added to the status.

APPENDIX 7: SURGICAL RISKS

Factors contributing to operative risks

1. Poor physical status (presence of disease). Anaesthetist must note diseases and disabilities, and see if patient's condition can be improved pre-operatively.
2. Poor physical fitness (absence of disease but no reserve). If possible improve patient's fitness - changes to lifestyle, exercise, weight loss if an athlete in training.
3. Cardiac abnormalities e.g. Goldman scale
4. Extremes of age, greatest neonatal to under 1 year of age, rising over 65 & greater over 75-80
5. Male patients. More likely to have severe trauma and to have I H D.
6. Physiological depression or extreme anxiety. Will to live is important.
7. Race. Non-white greater risk - generally more likely to have economic, hygienic & sociological disadvantages, poor nutrition and chronic ill health.
8. Long duration of anaesthesia and surgery. Over 4 hours relative risk 10x that of surgery lasting < half hour, over 6-8 hours 20x relative risk (Tiret).
9. Surgery of vital organs

Lowest death rates		Muscle
		Genital
↓		Renal
		Hepatic
		GI Tract
↓		Pulmonary
		Cardiac
Highest death rates		Cerebral

10. Complex surgery. Multiple factors, time, blood loss and surgical skill etc.
11. Emergency surgery.
12. Lack of skill of operating team and infrequent performance of procedure - need to refer to 3y centres.
13. Availability radiology, pathology, blood bank, ICU & expert surgeons & anaesthetists & nursing staff.
14. High quality well maintained equipment, microscopes, video equipment lasers, instruments etc.

Absolute or relative contraindications to day surgery

- Procedure associated with significant blood loss or severe post-operative pain
- Acute concurrent illness (pyrexia, infection)
- Poorly compensated or incompletely evaluated systemic disease e.g. severe diabetes, asthma IHD, morbid obesity
- Sickle cell disease or other severe haemoglobinopathies
- Coagulopathy
- Acute substance abuse

- Abnormal airway anatomy leading to expected difficulty with intubation
- Premature infants, infants with bronchopulmonary dysplasia, infants with a history of apnoea, or infants requiring supplemental oxygen
- Susceptibility to malignant hyperthermia
- Children less than 1 year old with a family history of SIDS
- Lack of social support or responsible adult during post-operative period
- Lack of understanding of requirements by patient or family.

Figures guide

- Overall mortality approx. 1 in 1000 operations
- Death during anaesthesia or within 24 hours of anaesthesia approx. 1 in 13 000 operations
- Complications \pm 1 in 750 anaesthetics
- Deaths due to anaesthesia alone 1 in a quarter million
- Surgeons will give you surgical mortality and morbidity figures for different procedure