Registrar & Fellow Guide

Orthopaedic Department

August 2010

The Royal Children's Hospital Melbourne

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REGISTRAR AND FELLOW HANDBOOK

Essential to Orthopaedics

DEPARTMENT PHILOSPHY

The Department of Orthopaedics embraces the philosophy of care as held by The Royal Children's Hospital which is:

Child and family centred care - includes the principles of informed choice, collaborative decision making and the inclusion of families and carers as partners in the provision of care, as well as the provision of a child and family centred environment and facilities.

Respect for children's needs and issues - focuses on issues such as developmental needs, pain management and assisting children to become active participants in the treatment of care.

Care coordination - is part of the core business of the hospital, programs of care developed, particularly for patients with chronic conditions requiring multidisciplinary care.

Partnerships and linkages – aims to develop stronger relationships with metropolitan and regional hospitals, community paediatricians, GP's, community agencies and schools to facilitate integrated care coordination.

In the orthopaedic environment these principles essentially are the framework by which we strive to care for our patients. Family centred care refers to the delivery of medical treatment in a non paternalistic fashion where decision making and discussions occur in close conjunction with the patient and family in such a way to minimise the disruption to family life and return the child to their home environment as soon as possible.

DEPARTMENT GOALS

It is our aim to provide you with an education in the field of paediatric orthopaedics that is up to date and consistent with world best practice. In particular the knowledge and skills you gain would be sufficient to:

1. pass the fellowship examination in the paediatric orthopaedic section
2. to be able to look after general paediatric orthopaedic trauma and basic elective paediatric orthopaedics
3. to understand the difference in looking after children and their families in comparison to that of adult practice
4. to recognise and effectively refer tertiary level problems, and
5. have a foundation from which a part-time or full-time career in paediatric orthopaedics could be realised

SERVICE

As a department we are committed to providing excellence in tertiary level paediatric orthopaedic service to Victoria, Tasmania and Southern NSW.

The following are essential areas of elements to that service:

1. courteous, accurate and timely communication with parents and family
2. communication with referring doctors and physiotherapists
3. quality pre operative, operative and postoperative care
4. provision of advice and education

PERSONNEL

Consultants

Associate Professor Leo Donnan
Chief of Surgery
Director of Orthopaedics
Mr Ian Torode
Head of Clinical Orthopaedics
Professor H Kerr Graham
Professor of Orthopaedic Surgery
Mr Jitendra Balakumar
Mr Chris Harris
Mr Abhay Khot
Mr Michael B Johnson
Ms Sue Liew
Mr Gary Nattrass
Board of Studies representative
Mr Mark O'Sullivan
Mr Paulo Selber

Office staff

Cvetanka Bogoeska
PA to Associate Professor Leo Donnan
Mary Sheedy
PA to Professor Kerr Graham
Bernadette Borthwick
Secretary to Consultant Orthopaedic Surgeons
Andrew Stanish
IT Services

Fellows

- 1 clinical Fellows in paediatric orthopaedics for 12 months
- 1 clinical Fellows in paediatric orthopaedics for 6 months
- 1 Fellow in Limb Reconstruction for 6 months

Registrars

- 4 Registrars from the Victoria / Tasmania Combined Orthopaedic training program on a 6 month rotation

Resident

- 2 on rotation from The Royal Children's Hospital Junior Medical Staff training program usually 3 to 6 month rotation

Physiotherapists

Sharon Vladusic
Senior Paediatric Orthopaedic Physiotherapist
Prue Weigall
Senior Paediatric Orthopaedic Physiotherapist

Nurse Coordinators

Cheryl Dingey
Limb Reconstruction Nurse Coordinator
Mela Harambasic
Cerebral Palsy Nurse Coordinator
Joanne Noonan
Scoliosis Nurse Coordinator

4 Main

Jane Wilcock
Nurse Unit Manager

Donna Peachey
Care Manager
Barbara Purdie
Care Manager

Honorary Positions

Mr Richard Angliss
Mr David De La Harpe
Mr Richard de Steiger
Mr D. Robert Dickens
Mr Michael A. Johnson
Mr Peter Turner
Mr Peter Wilde

SERVICE ROLES

Consultant

- overall supervision of management of all patents both elective and emergency, public and private, inpatient and outpatient
- delegation of duties to fellows, registrars and resident both in the inpatient and outpatient areas
- provision of teaching and training in required knowledge and skills
- designated mentoring by an individual consultant to a registrar

Fellows

- active self-driven acquisition of knowledge and skills
- independent operating sessions in elective and emergency settings within the knowledge and skill level of the individual
- direct management of individual patients
- direct supervision of the daily working round
- liaison with supervising consultant regarding patient management
- supervision and mentoring of the activities of the resident including provision of a weekly tutorial
- completion of a research project
- coordinate a monthly journal club and morbidity and mortality audit

Registrars

- active self-driven acquisition of knowledge and skills
- supervised and independent operating sessions in elective and emergency settings within the knowledge and skill level of the individual
- direct management of individual patients
- direct supervision of the daily working round
- liaison with supervising consultant regarding patient management
- support of and close working relationship with resident
- provision of education sessions to ward and outpatient staff
- completion of a clinical and /or research project
- maintenance of department database
- coordinate weekly departmental meeting and audit
- completion of education requirements (see page 31)

Resident

- provide medical review and management to ward patients
- coordinate care of complex patients
- work closely with ward staff to ensure expedient patient flow
- ensure that quality care is delivered to patients and families
- assist in both outpatients and theatre as required

IMPORTANT INFORMATION

Tasks to be completed prior to commencement

- Read the Registrar & Fellow Guide
- Contact previous registrars for handover
- Contact Cvetanka Bogoeska 9345 5450 for rostering arrangements and forward your email address
- You should complete Employment Details, Employee Bank Details and Tax file number declaration Forms, and hand them in to the Junior Medical Staff Department.
- **Provider Number**
  You will need a provider number for each hospital you work at if you refer patients to other doctors. This enables patients to claim reimbursement from Medicare. An application form for a provider number can be obtained from the Junior Medical Staff Department and there should be one in your commencement papers. It will take approximately three weeks for you to be notified of your provider number; please give this number to the JMS Department and make sure you write it on any referrals which you write.
- **Prescriber Number**
  You will need a Prescriber number to use when writing out prescriptions for patients. One Prescriber number is allocated to a doctor and will cover all locations. To obtain a Prescriber number you will need to attend a briefing session; telephone the Health Insurance Commission on 132290 or 9605 7518 to book into a session. Please give your Prescriber number to the JMS Department and make sure you write it on any prescriptions which you write. **IT IS IMPORTANT THAT YOU PRINT YOUR NAME CLEARLY ON ANY REFERRALS AND PRESCRIPTIONS WHICH YOU WRITE!**

Things to do on DAY ONE of your new job

1. **Collect four cards** to attach to your ID badge: Resuscitation, Immunisation and Antibiotics guidelines and the Tecom access card. (If you are at orientation day, these will be attached to your new ID badge). These are available from the Junior Medical Staff Department.

2. Find the **Clinical Practice Guidelines** on the RCH Intranet http://www.rch.org.au/clinicalguide/index.cfm?doc_id=5033 Familiarise yourself with the guidelines relevant to your job.

3. Be aware of the **Junior Medical Staff Committee (JMSC)** that meets on alternate Thursdays at 8am in the RCH Board Room, to discuss junior medical staff issues. **This is your committee** and you are welcome to attend any meeting, and to put things on the agenda.

4. RCH has a Medical Emergency Team, **MET**, which can be called by ANY member of staff to review and assess ill children (call 777). The aim of the MET is to provide emergency care, to improve outcomes in seriously ill children, and to educate staff in the identification and management of seriously ill children. Please familiarise yourself with the MET guidelines. Please refer to Page (26)

5. Check that passwords have been obtained for Synapse, IBA, Clara

6. Collect radiation badges from theatre

Dictating Services

Operating Instructions:

Dial: 03 9949 2020

1. When prompted enter your user ID and press #
2. When prompted, enter document type (eg: 2 = letter) and press #
3. Enter a patient ID and press #
4. Press 2 to record
5. Press 1 to play or pause
6. Press 4 to stop
7. Press 5 to finish the report and start another

Basic Instructions:

Quick start guide to OzeView. Web-based Medical Records System for the management of dictation transcription and file

1. Go to www.ozescribe.com.au and click onto **Secure Login** on the left hand side of the page.
2. Enter your username and password (as provided by OzeScribe). The client name is RCH>
3. Go to **Physicians Folder**
4. Open the first listed transcription by clinicking on the **'T'**
5. Click **Edit** if any changes are required
6. Press **Save & Close** on the top icon bar when edited. This will take you back to the transcription ,
7. Click **Complete/Next** from the icon bar to send this one onto the next process and to open the next letter in your queue.

Please fell free to contact OzeScribe on 1300 727 423 for further assistance if required

Discharge Summaries

Requirements

- Discharge summaries must be completed electronically on CLARA for every inpatient episode. A small group of day stay admitted patients do not need a discharge summary – ie day chemo or dialysis. This will be discussed on your first day on the rotation.
- Discharge summaries should be started on patient admission and completed on discharge. All completed summaries and medical records must be returned to Health Information Services within 48 hours of an inpatient being discharged to expedite the continuum of care, communication and the completion of coding.
- All relevant sections of the discharge summary must be completed. The use of abbreviations should be avoided. The CLARA system should be used to print all copies of the discharge summary and the printed patient copy should be given to the parent / patient prior to their departure from hospital.
- All registrars are responsible for discharge summaries for all quick turnover patients. It is advisable to initiate these summaries on CLARA at the time of writing the operation report. The resident can assist for discharge summaries for more complex patients admitted to 4 Main with co-morbidities.
- Care managers may also contribute to the summary for their patients and will include their contact number for GP follow-up as needed.
- The unit registrar is responsible for overseeing this task and ensuring completion of summaries on patient discharge.
- A monthly table of outstanding summaries is distributed monthly to all medical staff including RMOs and heads of department.

Sources of Support for Junior Doctors

Are you having problems? There are many people you can contact to provide support. These include:

Your mentor	If you are a paediatric resident or registrar you will have been assigned a mentor.	Click here to access the Mentor List for 2010 in read-only format.
Dr Phillippa Shilson	RCH Chief Resident 2008	Page 4442 Phone x7055 or mobile via switchboard 24/7
Dr Margot Nash	Joint Director of Paediatric Physician Training; General Paediatrician	Email margot.nash@rch.org.au or page/phone 4726
Dr Mike Starr	Joint Director of Paediatric Physician Training; Paediatrician, ID Physician and Consultant in Emergency Medicine	Email mike.starr@rch.org.au
Employee Assistance Program	Externally provided confidential staff support offers free counselling about hospital stresses or personal matters.	Call 1300 360 364
Margaret Hartley and Tom Miller	Chaplaincy, RCH	via switchboard person of the day; 24 hour service
A/Prof Mike South	Head of general paediatrics, RCH	page/phone 5184, sec 5182
Dr John Rogers	John is a geneticist who knows the hospital and the stresses of the resident staff well. He also has a counselling / psychotherapy practice.	phone 9419 8482 17 George St, East Melbourne
Victorian Doctors Health Program	Independent service for doctors who are ill or impaired, including those affected by substance abuse and psychiatric illness	Phone 9495 6011 27 Victoria Parade, Fitzroy
Mr David Ansell, Ms Henny Zimmerman	Educational psychologist / family therapist / social worker. Specialise in assisting doctors having trouble passing specialty exams. Can see people after hours. Approx $100 p/h tax-deductible.	Phone 9531 4908 Elsternwick
Ms Lousie Bailey	Consultant social worker, experienced in anxiety and trauma management	9428 9244 0412 039 494
Royal Melbourne Hospital Parkville Campus, Staff Medical Centre	Dr. Philip Hegarty - GP specialising in medical and psychological health of doctors.	Phone 9342 7390

Hours of duty

Monday – Friday: 7:45AM till 5:30PM

It is recognised that there is a degree of flexibility where sometimes a registrar and fellows will work slightly longer than these hours and on other days considerably less. It is expected that these hours will balance out and that adequate time is provided in the roster for all required activities to be performed.

Each roster has an morning or afternoon off and unless there is a clinical requirement it is expected that this will be taken.

All timesheets will be pre-populated by department and any variation to the rosters will need to be discussed directly with either Mr Michael Johnson or A/Prof Leo Donnan.

Infection Control *(essential to orthopaedics)*

The **IMPACT** (Infection Management, Prevention and Consultation Team) is available to you for consultation on any issues involving the precautions required for the management of patients with infectious diseases, nosocomial infection outbreaks and investigation of unusual pathogens. Infection control policies are developed and updated in line with current national and overseas guidelines and recommendations. They are all available on the intranet, http://www.rch.org.au/policy_rch/index.cfm?doc_id=6097 .All medical staff should familiarise themselves with these policies. Additional information and resources can be obtained via the Infection Control home page on http://www.rch.org.au/infection_control/index.cfm?doc_id=883

IMPORTANT POINTS FOR YOU TO KNOW

HANDWASHING is the most important means of preventing nosocomial infections.

STANDARD PRECAUTIONS: the use of personal protective equipment is encouraged where there may be a risk of contact with blood/body fluids regardless of known or suspected infection.

TRANSMISSION BASED PRECAUTIONS: use for patients with known or suspected infections. A table of specific precautions required for each infectious disease can be found on the home page under policies and procedures.

NEEDLE STICK INJURY

- Hospital policy **MUST** be followed
- See the guideline on the intranet at: http://www.rch.org.au/policy_rch/?doc_id=6488
- Informed verbal consent must be obtained **BEFORE** blood is taken from the source for viral studies and documented in the patient notes.
- Laboratory request cards must have all details of **BOTH** the affected person and the source for viral studies.
- Incidents are managed by the Staff Health Nurse, extension 5740 from Monday to Friday 0900-1700 or the Emergency Department after hours on extension 6153.

STAFF VACCINATION

- Immunisation status should be up to date.
- Contact the Staff Health Nurse on 5740 for advice to arrange your vaccinations.
- Immunity to varicella should be confirmed either by past history of the disease or serological evidence, as vaccination is now available.
- Complete and return the vaccination history form and your history will be entered on a database which can generate reminder notifications for you.

PATIENT CARE EQUIPMENT

- All equipment used on patients will be either single use or reprocessed according to department protocols prior to use on the next patient.

MULTI DOSE VIALS

- Accessing multi-dose vials is only permitted when appropriate precautions are used.
- Only medications designated by the Pharmacy Department may be multi-patient use.
- A clean needle and syringe must be used each time the vial is accessed.
- The vial must be labelled with the date and time of access.

Infection Control Physician: Dr. Andrew Daley ext. 5730/3171, pager 4850

Infection Control Coordinator: Ms. Sue Scott ext. pager 5740

Clinical Nurse Consultants

- Mrs. Terri Butcher-pager 4073
- Ms. Sue King-pager 6663

Leave

During the first week of work at The Royal Children's Hospital it is expected that both annual and conference leave will be identified and the appropriate leave forms completed and forwarded to the department office.

Only one registrar or fellow may take leave at a time unless permission is obtained in writing from the head of the department.

During this first week adjustments to the rosters can be made and theatre and outpatients will be notified of changes to activity according to the availability of staff. **It cannot be emphasised enough how important this initial process is for the planning of the department's activity.**

Library

Hospital

The library is on the first floor of the main building. RCH Library. It's open Monday-Thursday, 8:30-5:30 and Friday, 8:30-5:00. You can also access the library out of hours; check their website for details.

ONLINE ACCESS
The library service Internet site is: http://www.rch.org.au/library/
This site offers access to the library book catalogue, print and online journal holdings, various online databases, online training and useful links to other sites. (Some sites are only available to users accessing the site from within the hospital) Remote (offsite) access to the book catalogue, databases and most online journals is available to library cardholders.

MATERIAL HELD
New materials are listed in the weekly newsletter 'Library Update' – subscribe via the library website.

Journals: Over 250 print and 1500 electronic journal titles are held. A list of holdings is available via the library website. New print issues are displayed each Monday for one week.
Books: Holdings of the book collections, which include the Reference collections, are available via the computer catalogue in the library or via the library website. New books are displayed each Monday for one week.
Audio/Visual: *Audio-Digest Pediatrics* and copies of *Grand Rounds* are available for loan. Video and slide collections are available for staff loan and for in-house viewing.
Newspapers: *The Age, The Australian and Herald-Sun* are received each weekday; back issues are not kept.

COMPUTER WORKSTATIONS
Four computer workstations in the library offer access to online databases including MEDLINE, Embase, CINAHL, PsycINFO, Clinical Evidence, The Cochrane Library, EBM reviews, MIMS, and full text journals, as well as the Internet. An additional seven workstations are available in the library training room, when training is not being conducted.
Library staff are pleased to assist with literature searches and can also conduct searches on your behalf. Regular updates (Autoalerts) on a particular topic can be arranged.

SERVICES

Loans: Books (excluding Reference collection or items marked "Not for Loan"), audiotapes, slides and videos are available for loan by staff when you register with the library. Most loans are for 2-weeks unless stated on the spine label. Journals are not for loan, except in special circumstances.
Reserves: Holds may be placed on books which are either on loan or on display.
Inter-library loans: The library can obtain journal articles or books which are not available from the library, charges will apply. Requests can be made either at the library, via email (registration required), or via the online form from the library home page (registration required). The requestor must provide either the Department's PIN number or cost centre code for billing, or specify that cash will be paid on receipt of the material.
Library Instruction: Tours of the library and its facilities, as well as assistance with searching the databases, are available on request.
Photocopying: Photocopying is available, check with library staff for the code for junior medical staff.

Department

The department makes available extensive in house library which you are free to use on site. No books or journals may leave the department. As we have had significant losses of expensive texts each year an audit is undertaken every three months. Missing texts will be posted on the notice board and if not returned the library will be locked until such time as they are returned.

Link to orthopaedic department library

- Book list (Excel 44 KB)
  http://www.rch.org.au/emplibrary/ortho/orthopaedic_textbooks.xls
- Journal list (Excel 91 KB)
  http://www.rch.org.au/emplibrary/ortho/orthopaedic_journals.xls

Medical Documentation

The hospital policy on documentation in the medical record can be found at:
http://www.rch.org.au/casemix_rch/doc.cfm?doc_id=7297

Here are some tips to guide you:

- In the legal arena it is often stated that if it is not written in the medical record then it didn't happen!!!!
- Document events as they occur. In this way, documentation is virtually complete when the patient is discharged, improving efficiency and effectiveness.
- Ensure that patient's conditions are documented throughout the medical record, not just in the discharge summary i.e. progress notes, investigation results.
- Write legibly.
- Date, sign and specify designation for each entry in the progress notes.
- Make reference to any results pending.
- DO NOT use medical abbreviations, acronyms and eponyms if it can be avoided. These often have different meanings to different people. Use only approved abbreviations. This is especially important for discharge summaries and other documentation intended to be read outside the organisation. **Remember your audience.*
- Document death processes (e.g. respiratory failure, renal failure).
- Provide specific clinical data e.g. site of fracture, identification of organisms for an infection.
- Document any complicating clinical factors affecting patient care such as presence of malignancy, complications, age etc.
- Document the approach of procedures e.g. laparoscopic, open.
- Document all treatments initiated and medication prescribed and specify reasons for actions.
- Document the reasons why a procedure may have been cancelled.

12 Steps to a good Discharge Summary – GP Perspective

Discharge summaries are invaluable for continuity of care, safer care and transition between hospital and community, improved patient communication and education and better overall outcomes.

1. Make sure all your patients have their **GP details** documented on the discharge summary. If they do not have a GP, encourage them to find one.
2. Follow the ABC Rule:
   - **A**ccurate
   - **B**rief *(less than about 150 words / ~10 lines).*
   - **C**omplete
3. **Avoid abbreviations** or define the meaning on first use.
4. State the **ACTION PLAN** clearly i.e. OPD appointments, discharge destination, allied health input.
5. SAY EXACTLY **what you would like the family doctor or community paediatrician to do**: follow-up, further investigations.
6. **Contact ward pharmacist** for a full medication list printout. Need ~ 2+ hours notice. Attach to summary. Otherwise, type discharge medications into summary.
7. Include **RELEVANT pathology/radiology** results. Arrange for copies of 'results pending' to be sent directly to GP.
8. Include the most appropriate **contact name and number** (ie consultant, care manager or registrar).
9. **Work as a team** with GP, community paediatrician and other community healthcare providers in discharge planning. This is essential in COMPLEX patients.
10. Always **phone the GP directly** about significant events, such as death or major diagnosis.
11. Explanation of the discharge summary is an important part of **parent education**.
12. A discharge summary is only as good as its TIMELINESS – **start on admission** (ie presentation, pre-existing, and history) and **have it ready on discharge**.

MET (Medical Emergency Team)

RCH has a Medical Emergency Team (MET) service. The MET members are comprised of the ICU Registrar or consultant, an ICU nurse, an Emergency Department Registrar or consultant, and the General Medical Registrar on-call for the day (and at night the Night Registrars). When a MET call is made there is an overhead voice page (e.g. "MET 3 East"), the pagers of all these MET members are activated, and the ICU is called directly by switchboard.

The aim of the MET service is to increase the early recognition and prompt treatment of severely ill or deteriorating children before an arrest occurs. Below is the criteria that can guide clinical staff in deciding when it is appropriate to call MET.? MET calls can be made by any member of the clinical staff (doctor, nurse, paramedical staff etc). No one is too junior to call MET and no one needs higher approval to call. MET calls can be made by dialing 777 and stating the location.

There are other ways of getting assistance for severely ill children. The ICU has a consultative service that can be accessed by calling 5212 and talking to an ICU staff member. This direct communication with the ICU is appropriate for non-urgent ABC problems, for review of patients after discharge from ICU and for guidance on other critical care problems in stable children. If you think the child needs assistance urgently, MET should be called.

Here's the link. http://www.rch.org.au/clinicalguide/cpg.cfm?doc_id=7783

MET Criteria – Call 777 for help

- **Nurse or doctor worried about patient's clinical state**
- **Airway threat**
- **Hypoxemia** Sp02 <90% in any amount of oxygen

Sp02 <60% in any amount of oxygen (cyanotic heart disease)

- **Severe respiratory distress, apnoea or cyanosis Tachypnoea**

Age	Respiratory rate
Term–3 months	>60
4-12 months	>50
1-4 years	>40
5-12 years	>30
12 years+	>30

- **Tachycardia or bradycardia:**

Age	Heat rate too slow	Heart rate too fast
Term–3 months	<100	>180
4-12 months	<100	>180
1-4 years	<90	>160
5-12 years	<80	>140
12 years+	<60	>130

- **Hypotension:**

Age	BP (systolic)
Term–3 months	<50
4-12 months	<60
1-4 years	<70
5-12 years	<80
12 years+	<90

- **Acute change in neurological status or convulsion**

• **Cardiac or respiratory arrest**

Notes
Some of the values for respiratory rate, heart rate and blood pressure are outside the normal ranges for age: They represent concerning levels that may indicate serious illness, and that require expert review. It is also important to look for worsening trends in vital signs and report these.

On call/Recall

On call/recall can only be claimed by the **rostered** registrar or Fellow. It is an expectation that the on call/recall sheets are completed legibly and accurately with the patients' name, UR and service provided recorded. The process for verification is performed within the department and any discrepancies will be first discussed with the Registrar or Fellow involved prior to any alterations to paperwork being performed.

Rosters

During the six month term a the Royal Children's Hospital each Registrar and the six month Fellowship will once (ie 2 x 3 month term) and then swap over to the opposite team.

During these terms they will be directly responsible for the care and management of patients under the consultant to whom they work but when covering / on call they will take responsibility for the full unit's patients and be expected to communicate with the appropriate consultants.

- Link to rosters (Excel 40 KB)
  http://www.rch.org.au/emplibrary/ortho/Rosters_Registrar.xls

Sick Leave Cover

Who do I call when I am sick and can't come to work?

You must do 5 things when you are unwell and will be away:

1. Notify switchboard on 9345 5522, **this must be done as soon as early as possible**
2. Ask switchboard to put a message on your pager such as "Doctor is absent today" (so the nurses don't keep paging you).
3. Notify Cvetanka Bogoeska.
4. Ask Switch Board to then put you through to JMSD on x 6365 and leave a message on the answering machine for Elise/Matt/Rosemary to indicate you are unwell and if possible when you are likely to be able to return to work. The phone will be manned from 0830 until 1700 Mon-Fri.
5. When filling out your pay sheet for that day indicate absent due to Sick Leave. You must also fill out a leave form for this day or you will not be paid. Print one out from: http://www.rch.org.au/emplibrary/jms/ApplicationForLeave.doc
   Attach medical certificate or other documentation if available also.

Trauma Page

Please note that as of the 5th of March 2007 the on call Orthopaedic Registrar or Fellow will be carrying the trauma pager.

- You are not required to attend the trauma calls
- This is a courtesy page to inform you of all incoming trauma patients.
- The orthopaedic department have deemed it essential that you are aware of all trauma patients particularly if orthopaedic injuries are involved. This will assist in your planning particularly out of hours.
- The emergency department will lanpage you directly if you are required.

The pager will need to be passed to the next Registrar or Fellow on call as part of your handover process.

The following 5 pieces of information will appear on your pager.

1. The trauma level (1 or 2)
2. The number of patients expected
3. Relevant criteria (i.e main injury)
4. The expected arrival time of the patient in the ED
5. The patients age
   E.g.: “Trauma Level 2, patient 1, fractured pelvis, ETA 10mins ED”. . “Trauma patient age 11-12 years old”

Please do not hesitate to contact Cvetanka or myself if you have any queries.

Regards

Helen Jowett
Trauma Service Coordinator
9345 5442
jenelle.king@rch.org.au

Useful Extensions

Orthopaedic Department	
Cvetanka Bogoeska	5450
Bernadette Borthwick	5444
Cheryl Dingey	7027
Mela Harambasic	5465
Jo Noonan	5794
Toni Powell	4613
Mary Sheedy	5399
Sharon Vladusic	PG 5465
Prue Weigall	PG 5453
Orthopaedic Outpatients / Appointments	5311
Plaster Technician	6740
Gait Laboratory	5350
Orthotics	5870
General	
RCH Switchboard	91
RMO Quarters (Room 1)	5030/7177
Medical Staffing office (Rosemary McIntosh)	5144
Medical Staffing office (Elise Turner)	6365
Medical Staffing office (Matt Heath)	4230
Admissions Office	6179
Health Information Services (Medical Records)	6107
Pharmacy – Drug Information	5208
Pharmacy – Inpatient Enquiries	5491
General Surgery Office	5800
Gate Centre Enquiries	6391
Library Enquiries	5108
Clinical Quality and Safety – Incident Reporting	5452
Medico-Legal Physician	5452
Kids Connect = Primary Care Liaison	4645
Wards	
ICU (2nd Floor)	5211/5212/5213
Emergency (Ground Floor)	6153
Neonatal Unit (3rd Floor)	5008
3 East (Adolescent Ward)	5300
4 Main (Surgery)	
West End	5432
Write Up Room	4817/4706
4 North	5303
Day Surgery Unit	5385
6 East (Haematology/Oncology)	5645
7 West (Cardiology/Renal)	5702
8 Floor (Neuroscience Centre)	5438
Allied Health	
Physio/OT Department	5411
Social Work	6111
Speech Pathology	5540
Psychiatry	5511
R.D.N.S (Ph. or PG)	84405
M & C.H. Nurse (Ph or PG)	6163
Audiology	5550
Operating Theatre	
Reception	5240
Recovery	5253
Pathology	
Results/Reception	4932/5837
Blood Collectors	5821

Biochemistry	5217
Haematology	5824
Microbiology	5738
Virology	5850
Blood Bank	5829
Immunology	5733
Endocrinology Lab	5912
Radiology	
Reception	5255
Filing Room	5274
Reporting Room	5271
MRI (Scanner/Reporting/Booking)	5238
Ultrasound	7528
Nuclear Medicine	5259
After Hours Radiographer	PG 5255

Un-rostered Overtime

Unrostered overtime will only be paid to the Registrar/Fellow who is on call for that period as would recall.

PATIENT CARE

Admissions

All orthopaedic patients require a brief admission note that includes, presenting problem, past history, co-morbidities, medications, allergies/alerts and clinical examination. A short treatment plan should be written and the expected date of discharge and equipment required for discharge noted. Routine Medications such as anti epileptics and aperients should be written on the Drug Chart (MR 52) preoperatively.

Consent should in most cases will have been completed prior to admission but if not this needs to be completed (in consultation with the treating surgeon) prior to the patient entering the preoperative hold. The side to be operated upon must be marked and signed indelibly. **No elective patient may come to the preoperative hold unless consent and marking has been performed**.

Elective Cases

It is expected that the registrars and fellows will have pre-read details of the case and ensure that all the appropriate equipment has been booked and available on the day of surgery. Operating sessions are of 4 hours duration and generally booked to 80% capacity to allow change over and anaesthetic. The lists should be booked from youngest to oldest and day patients before inpatients to maximise patient flow and efficiency.

It is most important that the lists run to time therefore the registrar or fellow must attend theatre 15 minutes prior to the commencement time and assist in the patient's transfer to the operating theatre.

Prior to the list commencing the whole operating team should be introduced and the names of the staff for that theatre and their roles written on the whiteboard.

Consent will have been checked prior to the patient arriving in the preoperative hold and time out will be performed in theatre with the operatiing team present either prior to (preferable) or just after induction. The patient's identity confirmed, operation to be performed checked, limb marking identified and any allergies or alerts communicated.

Immediately following the end of the operation the registrar or fellow should communicate with the anaesthetists as to the postoperative fluid and pain management strategy, complete the operative note in MDAnalyze either by template or free text and ensure that the postoperative order sheets are fully completed and consultation with the treating surgeon as to their postoperative plan. **This is an essential communication tool to inform nursing staff, parents and the multidisciplinary team of management plan and proposed discharge date**.

In our current reporting system online discharge summaries are undertaken in CLARA and this process can be started in the operating suite to be completed on discharge.

- Link to Orthopaedic department theatre time table (Excel 90 KB) http://www.rch.org.au/emplibrary/ortho/Elective_Cases_Orthopaedic_Theatre_Timetable.xls

Emergency Patients

Patients who undergo emergency surgery need to be booked with the theatre desk as soon as it is known what surgical procedure is required and the clinical urgency for that procedure. It is important to speak to both the on call anaesthetists and the floor coordinator about the case so that they have the opportunity to appropriately assign resources and ensure that patients are not disadvantaged. All equipment required for the case should be discussed carefully with the floor coordinator particularly if equipment needs to be ordered and sterilised.

It is the expectation of the department that operations starting after 10:00PM are only for **true emergencies** and that every effort should be made to absorb our emergency cases onto our elective lists or into in hours emergency theatres.

Consent

All patients undergoing surgery at The Royal Children's Hospital are expected to have their consent complete at the time of being placed on the Waiting List. This normally occurs in the Outpatients environment but due to specific issues with patient's condition this may have to be delayed until after investigations are complete.

In any case it is expected on the day that the patient attends the hospital for their surgery that a completed consent form is on file. When a patient is reviewed pre-operatively the proceduralist should clearly identify that they are doing the procedure, understand the nature of the surgery and are competent at explaining this along with the associated risk to the parents and child.

The consent process is checked in the pre-operative hold and is expected that the patient will have a completed consent form and the appropriate marking of the operative site.

When providing informed consent to a parent or family it is important that the practitioner understands the operative procedure and the associated risks particularly for the individual patient. If you fele that you are not confident with taking consent please speak to your consultant who will help in this respect.

Time Out

The Time Out process is the final check that occurs in theatre by the surgical operating team. This team includes the surgeon, anaesthetist, anaesthetic tech and nursing staff.

The Royal Children's Hospital follows the World Health Organisations recommendations for Time Out as indicated in the hand book. The time out process is mandatory and can be instigated by any member of the team.

Surgical Safety Checklist (First Edition)

http://www.who.int/patientsafety/safesurgery/tools_resources/SSSL_Checklist_finalJun08.pdf

Postoperative Care

It is expected that the registrar or fellow will round on all the patients that have been operated upon under their care after the operating list and formally hand over any issues relating to these patients to the on call registrar or fellow and resident cover.

It is imperative that the universal postoperative sheet is completed as are any request forms for radiology, pathology, orthotics, physiotherapy or outpatient appointments.

Ward Rounds

A daily working ward round is undertaken at 7:45AM (not Wednesday's) which allows all staff, patients and their families to be brought up to date on any changes that occurred overnight and to have those that have been admitted as an emergency under a particular registrar, fellow or consultant to be transferred to their care.

These rounds are under the direction of one of the Fellows and it is important to recognise that large numbers of staff moving from bed to bed is intimidating for parents and children; therefore it is important that:

- The round introduces themselves to the families
- Patients and families be included in Ward Round discussions and time should be allowed to answer any questions that they may have.
- At the end of the ward round the required clerical work is completed to ensure that the rest of the day can proceed smoothly
- A clear and concise handover should be given to the resident and nursing staff so that they understand what tasks need to be completed and in what priority they should be done
- Any changes in the treatment/management plan should be documented on the green Treatment Sheet MR 56
- Discharges are attended to as a priority (note discharge time is before 1200)

Discharge

The turnover of beds is extremely important if we are to maintain an efficient and effective service. There is a constant focus on the discharge process and the planning for this to occur seamlessly. Failing to inform ward staff, orthotists, physiotherapists and outpatients as to what this plan is will lead to significant disruptions and delays in discharge.

At discharge it is expected that discharge summaries will be completed in CLARA with careful attention to the timing and nature of the postoperative review, the need for radiology, physiotherapy, orthotics and plaster technician appointments and ensuring that communication to the referring doctor/general practitioner is achieved.

Outpatients

The outpatient clinics give an opportunity to see a wide range of orthopaedic conditions and to be actively involved in the postoperative management of patients that have been operated upon by the unit. Each clinic will have new patients to be seen by the Registrar and Fellows with a chance of these to be presented to the consultants as short cases. The rest of the clinic will normally be a mix of new patients and reviews.

Punctuality with clinics is essential with the clinic start times being either 8:30AM or 1:30PM. There are certain mandatory expectations for the outpatient clinics that must be adhered to.

- All new patients will have a dictated letter back to their general practitioner and/or referring doctor
- All review patients will have a note in the medical record and at key points an update or summary letter to the general practitioner and/or referring doctor
- At the end of a consultation the patient will be given a booking slip which identifies the time for a review appointment the need for radiographs and attendance to the plaster technician.
- Appropriate forms should be filled in to complement this booking form given to the patient who is instructed to attend the outpatient desk for appointments to be made.

It is important that at each consultation a decision is made as to the need for the patient to attend for a review appointment. Many patients can be transferred back to their general

practitioner with an appropriate note and referred back to the clinic in the future if required by that practitioner.

Link to clinic time table (Excel 90 KB)
http://www.rch.org.au/emplibrary/ortho/Elective_Cases_Orthopaedic_Theatre_Timetable.xls

Waiting List

Patients are placed on the waiting list by completing an admission pack (under development). The surgeon completes the Short Stay and Consent forms whilst the Health questionnaire and Registration form are completed by the family.

These packs are left at the Outpatient reception and then passed onto the office staff. Please encourage families to complete all paperwork before leaving.

Priority – patients are placed on the waiting list according to clinical need and removed from the waiting list according to prioritisation and waiting time. Preadmission is part of the care pathway and used mainly for those patients travelling distances or who have significant co-morbidities.

Once booked for theatre every effort must be made to ensure a cancellation does not occur.

Details as to this process are contained in the access policy which must be adhered to at all times

- Link to access policy
  http://www.rch.org.au/policy_rch/index.cfm?doc_id=11212

Referrals

All referrals are managed by the outpatient clerical staff. When received they are date stamped and entered into the IBA system. Each letter has a screening cover sheet attached and a first cut for priority is done by the Orthopaedic Physiotherapists. The final prioritisation is decided by Mr Michael Johnson.

Incomplete referrals are returned to the GP for further detail

- Link to clinic to referral sheet (Word 35 KB)
  http://www.rch.org.au/emplibrary/ortho/Outpatients_Referral_Form.doc

Medications

Commonly used Medications

Codeine

Child	0.5 – 1.0mg/kg/dose	4-6/24
Adult	15 – 16mg/kg/dose	4-24

Ibuprofen

Child	5 – 10mg/kg/dose	3-4/24
Adult	200 – 400mg/kg/dose	4-6/24

Indomethacin

Child	1 – 2mg/kg/day	6/12/24
Adult	50 – 200mg/kg/day	8-24/24

Flucloxacillin

Neonate	25 – 50mg/kg/dose	8/24
Child	25mg/kg/dose	4-6/24
Adult	250 – 500mg/kg/dose	6/24

Cephalothin

Neonate	20mg/kg/dose	8-12/24
Child	12.5 – 25mg/kg/dose	4-6/24
Adult	500mg – lg/kg/dose	5/24

Cephalexin

Child	6.25 – 12.5mg/kg/dose	6/24
Adult	250 – 500mg/dose	6/24

Oxycodone

Child	Prompt Release	0.1 – 0.2mg/kg/dose	4-6/24
	Controlled Release	0.6 – 0.9mg/kg/dose	12/24
Adult	Prompt Release	5 – 10mg/kg/dose	4-6/24
	Controlled Release	10mg/kg/dose	12/24

Paracetamol

Child	15mg/kg/dose	4-6/24
Adult	500 – 1000mg/kg/dose	4-6/24

Amitriptyline

Child	1 – 2mg/kg/day
Adult	10 – 100mg/kg/day

Diazepam

Child	IV	0.1 – 0.3/mg/kg/dose	1-4/24 (max 0.6mg/kg/8 hours)
	Oral	0.05 – 0.3mg/kg/dose	8-12 hourly
Adults	IV	2 – 10mg/kg/dose	3-4/24
	Oral	5 -40mg/day	In divided doses

MEETINGS

Wednesday Mornings

8:00AM – 10:30AM	Consulting Room 5, Orthopaedic Department
11:00AM – 12.00PM	Teaching Ward Round

The Wednesday morning department meeting is the essential component of the working week. One registrar must take responsibility for the coordination of this session to ensure that each component of the meeting is kept to time; another will present the radiographs whilst a third will be responsible for correcting any deficiencies in the MDAnalyze coding

8:00AM – 8:30AM	Discussion of the following week's cases where the accuracy of the diagnosis, the surgical procedure, equipment required and list order are discussed with particular emphasis on the ability to complete the list within the allocated time.
8:30AM – 9:00AM	A review of the previous weeks work in which appropriate radiographs are shown in both pre and post op order and that the verification of the department report from MDAnayze is obtained and that any inaccuracies are corrected and complications recorded. This is the duty of a single identified Registrar and must be discussed with the Database Manager for alteration of the database information.
9:00AM – 10:30AM	**Clinical Meeting**. The clinical meeting will be conducted where approximately three patients will be presented by a Registrar for discussion around investigation and management issues related to that patient. **Special Session.** A rotating roster exists for other presentations including clinicopathological meeting and research presentations
11:00AM – 12:00PM	**Teaching ward round**. This ward round is taken by the consultant on call or their delegate.

Clinicopathological Meeting

Every three months a combined Orthopaedics – Pathology – Radiology meeting is held to review and discuss important cases. One registrar or fellow is charged with organising this meeting and collating cases to be presented. The cases are shown in a power point template that includes case history and radiology.

Dr C W Chow will require a list of cases one week before the meeting and he will present the findings

- Link to meeting time table (Word 70 KB)
  http://www.rch.org.au/emplibrary/ortho/Clinicicopathological_Meeting_TT.doc

LINK TO PPT TEMPLATE- Coming soon

Mortality and Morbidities / Journal Club

Once a month between 6:00PM – 8:00PM on the first Wednesday of every month, the mortality and morbidity meeting is presented followed by a journal club.

The mortality and morbidity data is collected from MDAnalyze and a standardised template by which the cases are presented to the department exists and should be utilised. All material relating to this meeting should be de-identified and a copy of the report given to Leo Donnan's personal assistant for electronic storage and will be forwarded to the Department of Quality and Safety.

Standard template for this meeting should be used.

LINK TO M&M FORMAT DOCUMENT – COMING SOON

LINK TO PPT TEMPLATE - COMING SOON

Department Audit

Every 3 months a department audit will be presented according to the template that has been developed in MDAnalyze. This audit is based on guidelines from the Royal Australasian College of Surgeons and looks at trends that have occurred through the department on a quarterly basis.

LINK TO AUDIT TEMPLATE – COMING SOON

Education

Short answers

Each week you are expected to collect a short answer question to be completed in a closed book fashion in your own time. These should be returned to the department for correction by the consultant on call for that week

Wednesday morning tutorials

At 0700 Wednesday morning a tutorial is held in Room 5 held by the consultant on call for the week. Please confirm the arrangement the day before and get someone to bring along the coffees!

Saturday morning teaching

Held as part of the registrar training program, Please be aware of the significant effort it takes to arrange these sessions and ensure consultant staff and patients are booked well in advance

Radiology tutorials

Dr Maine has kindly offered to take registrars and fellows for orthopaedic radiology tutorials. Please contact her to arrange a suitable time.

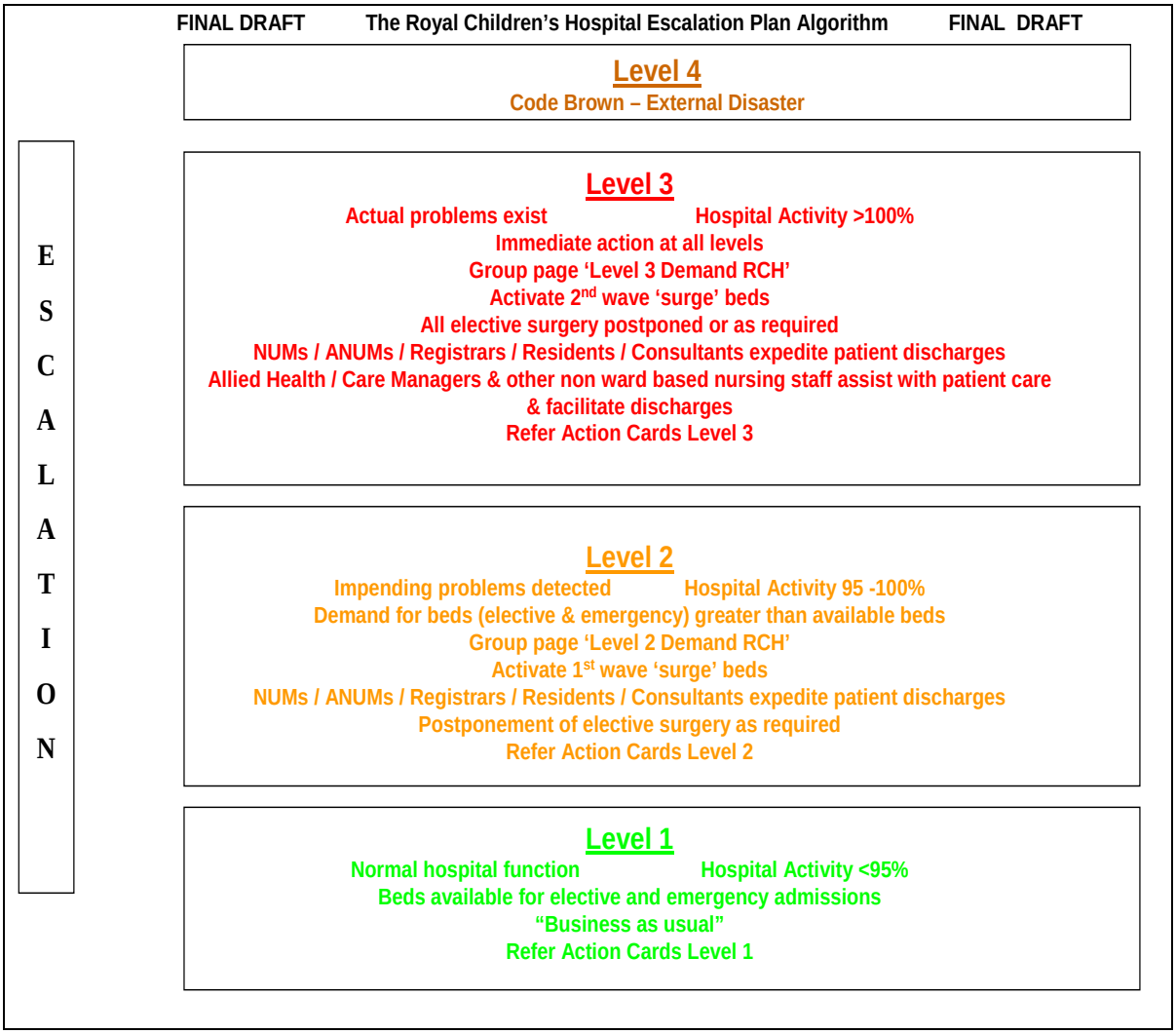
Fact Sheets

Each Registrar will develop two tact sheets in consultation with Sharon Vladusic and Prue Weigall, Senior Physiotherapist. Ideally these will be around a topic which is relevant to the unit that you are working with.

Research

During your 6 month term you will undertake a Research project. The topic should be based around an audit or a subject that has a short and natural conclusion. It will be your responsibility to contact the consultants directly as to what projects are available.

ESCULATION POLICY



THEATRE EQUIPMENT

Early in your rotation, please make contact with Anthony Stafford, The Nurse in Charge of Orthopaedic Surgery in Theatre, to receive a basic orientation to the Operating Suite. Also, utilise the Orthopaedic 'Where Is It?' book, copies of which are located in Theatre and the Orthopaedic Department. It is important to recognise that RCH CSSD is only staffed from 0700-2300hrs during weekdays, and from 0830-1630hrs on weekends/public holidays, so if any loan kits are required, pre-planning is essential.

Operating Tables

RCH Theatre is equipped with the OSI combined Jackson Spinal / Traction Table system, which can be configured in a multitude of positions and consists of many accessories. It is a requirement that all registrars and fellows familiarise themselves with this table, as due to its bulk and complexity, theatre nursing and technical staff require assistance with assembly and disassembly. Please ensure you are in theatre at least 15 minutes prior to anaesthetic start and that you remain after the case to perform these tasks.

Taylor Bryant can be contacted on 1800 060 168 to arrange an in-service on the table, and there is also a laminated poster-size booklet showing various table configurations, which is situated on one of the table accessory trolleys.

Link to traction table **(PDF 50 MB)**
http://video.wch.org.au/ortho/OrthopaedicTableSetupGuide.pdf

Standard Denyers operating tables are also available with a good range of attachments, and are used for most other orthopaedic procedures.

Drivers/Drills

- Colibri (Synthes) cordless drivers- suitable for K-wiring and small bone work, not suitable for heavy bone work, reaming or SUFE fixation.
- Stryker Systems 2 and 5 cordless drivers, including reciprocating and saggital saws - suitable for all heavy work including hard bone, intramedullary reaming and SUFE fixation.
- Compact Air Driver (Synthes) also available, suitable for heavy work as above.
- Hall (Linvatec) Wire Drivers are also available for K-wire fixation up to 1.6mm diameter.
- Cool Flex (Linvatec) electric burr handpiece with 4mm-5mm burrs also available.
- Hall (Linvatec) Micro oscillating saw available for fine bone work.

External Fixation

- Hoffman Standard and Compact Systems- full range, most commonly used trauma ex-fix, uses hand self-drilling Apex stainless steel pins.
- Orthofix & EBI fixators and rails- good range available, see sterile stock in theatre when booking a case, both styles use stainless steel Orthofix half pins which require pre-drilling. HA coated pins are available at short notice from EBI Biomet.
- Ilizarov External Fixation- 2 full kits are available for suitable cases, Apex stainless steel pins and plain/olive wires used with this system. Consultant involvement recommended with this system.
- Bremer (Depuy) Halo Crown system- full range available, jackets can be obtained via Depuy or RCH Orthotics Dept, can be used in conjunction with femoral traction (Steinman/Denham pins & stirrups) or with Hoffman pelvic traction.
- Hip Spica table, attachments and trombones are available with a range of perineal supports - hip spicas are used for many paediatric femoral fractures. Consultant involvement with these cases is recommended.

Internal Fixation

- AO (Synthes) Small and Large fragment LCP stainless steel screws and plates, including angled blade plates, DHS/DCS, and Intermediate Hip Screw (this is Smith & Nephew and uses AO small fragment screws).
- Asnis (Stryker) 4.0, 6.5 & 8.0mm titanium cannulated screws. Note that SUFE requires 8.0mm fully threaded screws as these are easier to remove at a later date.
- Titanium Elastic Nails (Synthes) and Nancy Nails (Depuy), including appropriate extraction tools.
- Legacy 5.5 System (Medtronic), used for spinal trauma- other systems available at short notice from Medtronic or loan from the Austin Hospital.
- A full range of Brema (Depuy) Halo systems are available, with halo vests and jackets supplied via RCH Orthotics or from Depuy as required.
- Acutrak Std and Mini screws (Medical & Optical) are available, and used for fixation of osteo-chondral fractures. Meniscal darts (Linvatec) are also consigned.

Other

- Osteoset pellets and MIGG3 injectable (Advanced Surgical Technologies) are also consigned, as is a range of Chronos (Synthes) granules. Simplex and Antibiotic Simplex (Stryker) bone cement is also available.
- Pulsatile lavage (Stryker) and Vac Dressings (KSI) are also available (must check).

Available but require rep call and equipment to be brought in:
Trigen nail (Smith & Nephew)- instruments are sterile on shelf, implants need to be pre-ordered from company and can be delivered within 2 hours of booking. Note that trochanteric nail insertion is required to avoid the piriform fossa for femoral nailing. Smith and Nephew contact is 9350 2877.

Any loan kits which are needed should be arranged in consultation with Theatre (loan kit co-ordinator Monday-Friday 0800-1600hrs), or through the nurse-in-charge or after-hours co-ordinator at other times. Planning meetings are attended by a theatre nurse every Wednesday morning to determine loan kit needs for the following week, and this is critical to good organisation and preparation.

DEPARTMENT SECTIONS

Cerebral Palsy – Ortho-CP

Introduction

Children are admitted for elective procedures in three main categories:

1. Single level surgery for the correction of deformity e.g. equinovarus foot in hemiplegia.
2. Single event multilevel surgery (SEMLS) for the correction of deformity and improvement of gait and function e.g. children with spastic diplegia.
3. Children with more severe cerebral palsy having operations for the prevention, reconstruction or salvage of hip displacement.

What you should know

1. In the case of surgery for the improvement of gait and function the admitting registrar should know details including the presenting complaint, the planned surgery and the following classifications:

   a) GMFCS level
   b) Gait classification (Hemiplegia: Winters, Gage and Hicks, Diplegia: Rodda and Graham).

   You should be familiar with information including recent Gait Laboratory reports, radiology (including CT measurement of anteversion), who provides physiotherapy for the child in the community and through what agency where? Use of orthotics, provider, comfort and fit.

Gait Laboratory visits and reports should be up to date i.e. within three months, if you identify that these are “out of date” inform the treating consultant to arrange a review video on the day of admission or week prior to admission.

PERIOPERATIVE MANAGEMENT

Multilevel surgery in children with cerebral palsy is a high risk surgical strategy with many potential complications. These can be minimised by appropriate pre-operative management, attention to detail intra-operatively and postoperative care.

1. **Avoiding, identifying and treatment of infection is extremely important**.
   On the morning of surgery patients should be admitted in time to have a shower in 4 North, alternatively they must shower before admission. Any history of prior infection should be thoroughly investigated. Checking all areas especially in respect to ingrowing toenails and pressure sores from orthotics will help to exclude possible areas for skin sepsis seeding to surgical sites. Intra-operatively prophylactic antibiotics are used and the duration is dictated by the perception of risk e.g. 24 hours for an uncomplicated case in which metal is implanted, up to 48 hours if allograft is used, check with the consultant in charge.

2. **Pain management in children with cerebral palsy is paramount**.
   Every procedure in a child with cerebral palsy hurts more than in a child with normal neuromuscular system. The majority of children undergoing multilevel surgery will have an epidural but these are not completely effective and additional monitoring and pain management will be required in the majority of children. Close liaison between registrars/fellows in the unit, pain team, nursing staff and the consultant is essential.

3. **Constipation**.
   Many children with cerebral palsy (especially GMFCS levels III, IV and V) have chronic constipation. They should have been contacted prior to admission by

preadmission clinic nursing staff to ensure that they are admitted with an empty colon and rectum. However this does not always occur and methods to minimise to effects of constipation from the first postoperative day are essential. Current bowel regime should be documented in medical admission and regular aperients ordered on Medication sheet.

As soon as oral intake is being tolerated, the majority of children should start laxatives and the intensity of bowel management needs to increase daily until normal bowel habit is re-established. Patients will need a greater degree of aperients than they usually have at home.

The most common cause for delayed discharge, including the need for re-catheterisation of the bladder, is when constipation is inadequately managed.

POSTOPERATIVE MANAGEMENT: TO BE COMPLETED AS APPROPRIATE IN THE POSTOP PLAN SHEETS

Discharge planning will have started prior to admission and should continue throughout the admission. The majority of children with gait correction surgery will go home in below knee casts with or without Zimmer knee immobilisers.

The majority will come back to clinic at between two and four weeks (average three) postoperatively according to the type of surgery and the consultant's wishes. Most children will return for a second postoperative visit (or be admitted) at between six and eight weeks postoperatively.

These first and second postoperative visits take about a half day and must be fully planned with all appointments booked prior to discharge. The registrars (not residents) are responsible for filling in the discharge slip in discussion with the consultant as well as ensuring the Gait Laboratory reports and postoperative plans are in accord with plans of the consultant.

The majority of children on the first postoperative visit (three weeks after surgery) will have:

1. Removal of cast
2. Wound check
3. X-ray of all osteotomies
4. Cast for new AFOs (type to be specified by the consultant, see Gait Lab and operative reports)
5. Re-apply new fibreglass casts
6. Decide and discuss weight bearing status with CP nurse coordinator, physiotherapist and consultant.

At the six weeks visit AFOs should now be ready for fitting and the routine is usually as follows:

1. X-ray all osteotomies
2. Remove casts
3. Attend Orthotics for fitting of AFOs
4. Review back in clinic and reassess weight bearing status and function

HIP SURGERY: PREVENTION, RECONSTRUCTION AND SALVAGE

Hip surgery for children with cerebral palsy is conveniently divided into preventative measures (adductor releases, phenolisation of the obturator nerve) reconstructive (VDROs, DEGA osteotomies) and salvage (McHale procedure, Girdle-Schantz, Castle procedure rarely, hip fusion or interposition arthroplasty).

These children are typically GMFCS III, IV and V and have multiple medical co-morbidities.

There is a high risk of both morbidity and mortality in this vulnerable population. This can be minimised by multidisciplinary care involving the child's paediatrician and especially the Department of Developmental Medicine who will advise on PEG feeds, seizure management, tone management etc.

INTRATHECAL BACLOFEN PUMP

A number of these patients will have an intrathecal Baclofen pump in situ. The admission of all such patients must be identified to the Developmental Medicine team in particular the ITB nurse Sacha Peterson and consultant paediatrician Giuliana Antolovich. Typically the pump must be protected intra-operatively by the use of bipolar, (not unipolar) diathermy and protected peri-operatively by antibiotics. Typically the pump will require changes in programming to adjust the dose of Baclofen delivered to the child (usually increased) peri-operatively.

POSTOPERATIVE POSTURAL MANAGEMENT

Children undergoing hip surgery have complex needs in relation to sitting positioning, splints and assistive devices. These need to be investigated before admission, adjusted during the admission and sorted before discharge. In general, early sitting and early mobilisation is the best protection against pressure sores, chest infections and gastrointestinal problems.

Just like patients with SEMLS, these patients have a very high risk of constipation and the preventative and management issues above also need to be addressed.

The majority of patients at GMFCS levels III, IV and V have spasticity and/or dystonia which need to be actively managed before discharge. The majority of patients will also require adjustments to their spasticity medication including changes in Baclofen dosage, provision of muscle relaxants such as valium both as inpatients and as outpatients prior to discharge.

- Link to GMFCS scale brochure (PDF 90 KB)
  http://www.rch.org.au/emplibrary/ortho/GMFCSHandout.pdf

Limb Reconstruction

Staff

- A/Prof Leo Donnan – Consultant Orthopaedic Surgeon
- Mr Chris Harris - Consultant Orthopaedic Surgeon
- Limb reconstruction fellow (6 month appointment)
- Limb reconstruction nurse – Cheryl Dingey
- Limb reconstruction physiotherapist – Meredith Cadwallader

Outpatient Clinics

Wednesday morning – 0830 – 1230

- LR patients and trauma patients with frames are seen in this clinic.
- Children requiring sedation for procedures are commonly seen in this clinic

Thursday morning – 0830 1230

- All LR patients with frames
- New patients and patients in the pre planning phase of treatment
- Past patients following frame removal.

Outpatients

New patients:

- Up to 3 per clinic.
- Investigations ordered and commenced.
- Letter dictated to local doctor/ referring doctor
- Data entry into MDAnalyze of aims, planning, baseline parameters.
- Treatment plan documented.

Preoperative patients:

- **Investigations concluded**
- Treatment plan decided
- Consent signed in clinic
- Complete Child Health Questionnaire
- Approach to take part in Informed consent module if eligible
- Determine appropriate orthosis and write card
- Arrange for attendance at Pre Admission Clinic.

Pre-Admission: Mandatory

- Meet with multidisciplinary team consisting of nurse, physiotherapist, education advisor and occupational therapist
- Physio assessment completed
- Clinical photographs attended
- CHQ completed
- Consent module viewing – if eligible
- Casting for orthosis

Theatre

- Ensure all equipment is available at least five days prior to case
- Notify radiographer for image intensifier
- No epidurals unless surgeon consents
- Supervise postoperative positioning

Post op orders

- Enter in MDAnalyze immediately post op
- Observations and reportable parameter
- Order and card for post-op x-ray (when required by)
- Order to commence turns/distraction and rate

- Notify Orthotics to fit frame add ons and foot pieces
- Pain management – no NSAIDS
- Follow up orders +/- x-ray on arrival

Inpatients

- LOS between 3 – 5 days, except for bilateral frames (7 – 9)
- Time of intensive physiotherapy and working on mobility
- Pain relief initially IV narcotic for approx 3 days - usually PCA then convert to orals eg: Oxycodone, Tramadol. Discharge with these medications.

Pin care: Commenced on day 1 – completed by day 3

Discharge: Discharge summary to be completed before discharge occurs.

- All patients require script for discharge medications ie: pain relief, script for oral antibiotics.
- NO NSAIDS

Mobilisation: state weight bearing status on discharge
Mobilisation aids to be used – stress minimal use of wheelchair with aim to be ambulant as soon as possible

Appointments

- One week following discharge in Limb Reconstruction clinic on Thursday morning. Specify if X-ray required – write up card pre discharge.
- Frequency of review: Every 2 weeks whilst lengthening with XROA
- Every 4 weeks whilst consolidating with XROA

Physio and nurse to see patient at each visit.

- Limb reconstruction web site
  http://www.rch.org.au/limbrecon/

Spinal Services – Ortho Spine

Introduction
Spinal patients needs, in particular preoperative and postoperative requirements, vary significantly depending on which diagnostic category they might fall.

Idiopathic Scoliosis

Preoperative
All these patients will require appropriate x-rays including bending x-rays and a traction x-ray. Many patients should also have a CT scan to look at pedicle diameters and other parameters of the spine. These patients should have had an MRI scan. Their preliminary blood work, pulmonary function and cardiogram should have been performed in an outpatient setting prior to admission, but nonetheless these issues need to be checked off prior to surgery including the fact that they have had appropriate clinical photographs taken.

Intraoperative
As part of the plan it is necessary to be aware whether the instrumentation, if any, will be either anterior or posterior and the appropriate size and style of the instrumentation needs to be available. The image intensifier should be booked. Cell savers should be booked although this is being examined at the present time. Spinal cord monitoring in most cases should be available.

Postoperative Care
The general thing with postoperative management is to allow for early mobilisation of the patient, careful management of fluid balance with a view to managing the patient relatively dry. If a chest tube is in situ the daily drainage needs to be monitored with a plan to remove the tube when blood drainage has ceased. Small amounts of persistent serous fluid are not an indication for leaving the drain in situ. Postoperatively the registrar needs to be aware of monitoring the patient's haemoglobin level, pulmonary function, fluid balance and neurological status. Postoperative external support may be necessary and ordered appropriately. Prior to discharge the patient should have full length x-rays of the spine. Prior to discharge their return to clinic visit should be organised with a request put in for follow up x-rays.

Cerebral Palsy/Rett Syndrome

Preoperative
These children will have significantly different needs from the idiopathic group. It is necessary to be sure that they have had erect and supine x-rays of the spine although bending x-rays may not be necessary. Some children will require a CT scan. All children should have photographs taken. All children should have had a preoperative anaesthetic assessment and in many instances it will be necessary to organise an ICU bed preoperatively. These children may also have other issues with pegs in situ or epilepsy requiring medication. It will be necessary to be sure of the surgical plan whether that requires a two stage procedure usually being on the same day, whether a single anterior or posterior procedure is likely to suffice.

Intraoperative care
Prior to surgery it is necessary for the registrar to ascertain whether there will be multiple stages to the patient's spinal reconstruction and whether those stages are intended to be one day or separate days. The postoperative orders should indicate the expectation of mobilisation and the need for external support.

Postoperative care
The goal of these children is to mobilise them reasonably quickly with a plan to get the children sitting out of bed by day three. Attention is given to pulmonary function in particular and trying to avoid aspiration and ingest infection. These children should also be managed relatively dryly, however given the alteration in oral intake of

medications and foods and fluid, care must be given to maintain anti-eleptic drugs and other medications. Many children will not need any external support but a few may require the same.

Spina Bifida/Kyphosis/Scoliosis

Preoperative
In addition to the needs as dictated for other groups these children should have some attention given to their bladder function and the presence or absence of urinary tract infections. If present that must be treated prior to surgery. The work up as described above is pertinent to these children and photographs should be obtained.

Intraoperative
Given the variability of children with this condition and the variability of skin sizes the appropriate hardware needs to be organised.

Postoperative
The key issues here are to note that one of many aspects of postoperative care is as for other children however these children will have deficiencies in sensation and so they are prone to pressure areas and skin breakdown and this is a nursing responsibility as well as a medical responsibility. Postoperatively these children may also require external support and this will require close liaison with the orthotic department.

All children with spinal deformity can develop superior mesenteric artery syndrome or CAST syndrome. Some of these children can be predicted and thus a preoperative naso-jejunal tube may be required. If the syndrome arises in the postoperative period without some other cause being found then these children should have a naso-jejunal tube passed as soon as possible. It should be noted that while it is indicated that children should try and be run dry through the postoperative period it is not uncommon for these children to be inadvertently overloaded which makes them candidates for an appropriate ADH secretion.

Gait Laboratory

- Gait lab web site
  http://www.rch.org.au/gait/

Gait analysis uses high technology equipment to measure how children walk. The technology is based around a number of specialised television cameras that capture light reflected off a number of spherical markers placed on the child's skin using double sided sticky tape. It is exactly the same as used in the animation industry to capture the movement of actors. Plates in the floor measure the force exerted by the child as they walk.

The marker data can be used to generate joint kinematics. These describe how the joint angles vary with time in three dimensions and are represented as an array of graphs. This data can be combined with force plate data to give another sheet of graphs representing joint kinetics, the moments applied to the joints during walking.

A full 3-d gait analysis also includes a rigorous clinical examination of the patient including measures of range of movement, muscle strengths and bony abnormalities. The whole process can take between two and 4 hours depending on the co-operation of the child and the number of different conditions we measure. For example the child might be assessed with and without ankle foot orthoses.

The analysis is conducted by a physiotherapist supported by a medical scientist. All the data is stored in the database and a preliminary clinical interpretation is prepared by the physiotherapist. On Friday mornings there is a reporting session at which the physiotherapists present this report to the orthopaedic consultant who dictates the final report on the data.

Over 80% of the children we see have cerebral palsy. Gait analysis is most useful in planning complex orthopaedic surgery which requires a package of various muscle/tendon lengthenings or transfers and bony re-alignment surgery that has to be chosen specifically for that child on the basis of the data. Reviewing the outcome at 12 months is also important.

A simpler video analysis (including a shorter clinical examination) can also be requested. These are most useful for monitoring children after multi-level surgery to ensure that rehabilitation is progressing as expected.

Musculoskeletal Oncology

CLINICAL NURSE SPECIALIST

Cerebral Palsy Coordinator

To coordinate and understand the needs of CP patients undergoing complex orthopaedic surgery. This includes ensuring the multidisciplinary assessment of all patients in consultation with surgeons and coordinating the patients and families through the surgical pathway to rehabilitation.

Key Responsibilities

- Coordinate CP clinics with CP physiotherapist
- Monday pm: Paulo Selber
- Tuesday am (wks 2 & 4): Prof Graham Ortho Rehab
- Thursday pm: Prof Graham/Abhay Khot
- Gary Nattrass & Michael Johnson also see CP patients in their clinics.
- These patients may be pre-op, post-op, pre gait lab analysis, post gait lab analysis, referrals, reviews
- Ensure follow-up appointments are made at the required times for post-surgical patients. This may include plaster room, x-ray and orthotics
- Coordinate operating lists -
- Inform Care Managers (4N) of upcoming SEMLS (Single Event Multi Level Surgery)
- Attend Pre Admission Clinics for SEMLS patients as able
- Education regarding surgery, preop planning, complications, pain, use of orthoses
- Liaison
    - Gait Lab
    - Theatre staff
    - Anaesthetists
    - Ward Staff
    - Physiotherapy
    - Othotics
    - Medical Imaging
    - Occupational Therapy
    - Social Work
    - Education Institute
    - Developmental Medicine
    - Rehabilitation Services
    - Home and Community Care
    - Other departments as required
    - Outside service providers eg community physiotherapists
    - Local GPs

Other Responsibilities

- Develop, review and evaluate appropriate Clinical Guidelines
- Produce patient education material relating to CP
- Participate and maintain the CP database
- Participation in research and outcome studies
- Attend weekly Gait Laboratory reporting session
- Attend Wednesday AM planning meeting

Act as a resource for patients, families & hospital staff

Limb Reconstruction Coordinator

The Limb Reconstruction Coordinator is responsible for managing and understanding the complex needs of patients undergoing treatment with an external fixator, internal lengthening devices and all patients requiring epiphysiodesis.

This includes all elective and trauma patients.

The coordinator liaises closely with many other members of the multidisciplinary team including:

- Physiotherapy
- Occupational Therapy
- Education Institute
- Play Therapy
- Orthotics
- Social Work and Mental Health may also be accessed should the need arise.

Major responsibilities include:

- Coordinating and managing Limb Reconstruction and Limb Review Clinics, including review of referrals and allocation of appropriate appointments
- Management of children with complex pain and coping issues including use of sedation and organising their follow-up to enable procedures to occur
- Participation in the maintenance and further development of tools in the Limb Reconstruction data base (MDAnalyze)
- Coordinating the multidisciplinary assessment of patients and planning their preadmission clinic attendance, summarising the final outcome and acting on any issues
- Resource person to non-Orthopaedic / Orthopaedic wards in RCH, district nursing and other hospitals in regard to frame care and trouble shooting
- Discharge planning for all patients with an external fixator, including stock provision, ensuring all medications are provided, organisation of Outpatient appointments, and referrals to internal and external nursing services
- Continual coordination of the ongoing care of patients after discharge into community and liaison with external nursing services
- Education of patient/family regarding frame adjustments, pin site management, recognition of complications and what to do, pain management, and use of orthoses.
- Seeing patients independently as outpatients and referring to medical staff if required

The Limb Reconstruction Nurse Coordinator is responsible for the limb reconstruction services within the Orthopaedic Department and ensures that the multidisciplinary process occurs in consultation with all surgeons, and other team members. Involvement in other related projects also occurs from time to time, as directed.

Scoliosis Coordinator

The Scoliosis Coordinator is responsible for the management of patients with spinal conditions; in consultation with the appropriate medical staff, allied health workers, nursing staff and families; to ensure the smooth transition of patients throughout their treatment process. The patient group includes patients with scoliosis, kyphosis, spondylolisthesis, hemivetrebra and other spinal conditions.

It is important for the Scoliosis Coordinator to maintain a good relationship and thorough communication with the following areas in relation to patient treatment and referrals:

Internal

- Anaesthetists
- Respiratory Medicine
- Cardiology
- Neurology
- Ward Staff
- Physiotherapy
- Orthotics
- Mental Health
- Social Work
- Intensive Care Unit
- Occupational Therapy
- Education Institute

External

- Community Health providers
- Families and Carers
- Outside service providers

Key Responsibilities of the Scoliosis Coordinator

- Coordination of scoliosis patient's Pre Admission Clinic involving organising preoperative tests and review by appropriate medical teams ie; MRI, X-rays, Pathology, ECG, Lung Function Test, Cardiology, Respiratory and Anaesthetic review.
- Maintenance of the scoliosis surgical and outpatients waiting lists; reviewing and booking appointments and surgery when appropriate.
- Assist theatre bookings and organising appropriate equipment ie: spinal cord monitoring, ICU bed, Cell Saver.
- Supervise surgeon availability and schedules; ensuring two surgeons available for operating theatre.
- Manage the booking and running of the Complex Spinal Clinics (Spinal Pre Surgical Clinic).
- Provide ongoing support and education to patients and their families regarding pre and postoperative expectations.
- Liaise and communicate with appropriate medical teams and allied health workers.
- Provide support to patients and their family whilst in hospital and inform ward staff of patient's treatment plan.
- Commence discharge planning for patients following spinal surgery to ensure a smooth transition from hospital back to community.
- Collection of statistics and data on inpatient and outpatient activity and acuity, provide quarterly report to Director of Orthopaedics..

ORTHOPAEDIC PHYSIOTHERAPISTS

Orthopaedic Assessment Clinic

The Orthopaedic Assessment Clinic (OAC) is a physiotherapist-led clinic which was established in 2005 due to the increasing demand for outpatient services, and waiting lists for outpatient clinics which had become unacceptably long.

It was implemented as a screening clinic, to provide an entry point for orthopaedic assessment. Almost 50% of all new referrals to orthopaedic outpatients are now seen initially in the OAC. The target population for the OAC is clearly defined – and includes infants with:

- hip dysplasia
- talipes
- children of all ages with normal postural variations (e.g. flat feet, bow legs),
- musculoskeletal conditions such as knee and back pain.
- some children are seen only once in the clinic, while others (approximately 50%), are identified as requiring consultant referral, or referral to another specialist clinic, Physiotherapy or Orthotics.

Ongoing review and management is provided by the OAC for children with talipes (Ponseti method), hip dysplasia, and other conditions which do not require surgical assessment. Ponseti casting is generally booked for Monday afternoon clinic with Paulo Selber, and Friday morning with Michael Johnson.

Timelines have been established for urgent, semi-urgent and non-urgent referral categories (1 week, 1 month, 3 months respectively).

As with all clinics, external referrals may be received from other hospitals, as well as GP's, paediatricians and other specialists. Internal referrals are received from other clinics including the Emergency Department.

The OAC runs concurrently with consultant clinics and fracture clinics, with consultants and registrars providing support as needed for the physiotherapists when managing children with more complex problems.

Physiotherapists are not currently able to sign X-ray or ultrasound cards, and will require registrar assistance during their clinics for the signing of Medical Imaging request cards.

The physiotherapists have developed a series of reader-friendly fact sheets which can be found in each clinic room.

You are welcome to join us in any of the clinics.

ORTHOPAEDIC INPATIENT UNIT – WARD 4 Main

4 Main is a busy 28 bed Unit, located in the Main Building of the hospital. The unit is a combined Orthopaedic, Plastics, Burns and Speciality Gastroenterology Unit. The average patient length of stay for orthopaedic patients is 3 days; as a result, there is a high throughput of patients and a high demand on beds. Accurate and up to date communication with registrars is essential to ensure patients receive the most appropriate care with the best outcomes. We rely on the organised coordination of Care Mangers, Nurse Coordinators, bedside nurses and allied health professionals to ensure safe and timely transition from hospital to the home.

Expectations of Registrars

- Preoperative medical admission, including regular medications written on the Medication Chart (MR 52). Particularly important are anti epileptics and aperients; missed doses of these can result in complications.
- Accurate and clear documentation on postoperative orders, (later pages of Operation Report), outline the plan of care, include a planned discharge date and follow up required.
- Any changes in this plan are clearly documented in the patient progress notes. Remember to notate with pager number and print surname.
- Discussions around management of patient care should include patients and their families/carers. This includes courtesy, respect for privacy and allowing time for questions to be asked.
- Verbal communication with the nursing staff and inclusion in the decision making process where appropriate.
- Carrying pagers during working hours and when on-call to ensure communication with ward can be maintained at all times

SPECIALISED CLINICS

Bone Dysplasia

- Held every 4 weeks, on a Tuesday morning 9:00AM – 12:30PM, 8th Floor, Main Building

Brachial Plexus

- Held every fortnight, on a Friday morning 9:00AM – 12:30PM, Physiotherapy Department, Level 4, Main Building

Orthopaedic/Plastics Meeting

- Held every three months, on a Friday morning 8:00AM – 9:00AM, Seminar Room, Level 4, Main Building, 4 Main

PRE-ADMISSION CLINIC

Early in 2007 The Royal Children's Hospital established a Pre-Admission Resource Centre. This type of service is in existence in paediatric hospitals throughout Australia and has been shown to be effective in improving the quality of patient care, reducing surgical cancellations and increasing bed availability.

A Pre-Admission Coordinator has been appointed - Leanne Turner - who can be contacted on

Phone 9345 4115
Mobile 0403 443 334
Pager 4334
Email leanne.turner@rch.org.au

At RCH we are striving to have a very 'patient specific' clinic where patients can be reviewed by the particular specialists which they require, rather than having a generic set of people to visit based on their surgery only. These specialists may include Medical, Nursing, Physiotherapy, Occupational Therapy, Play Therapy, Social Work, Anaesthetics, Dietetics, Education and Home and Community Care.

- If you feel that a Pre-Admission phone call or visit may be required for a patient, please contact me on the details listed above. Alternatively, the option of a Pre-Admission assessment can be checked on the Admission booking form.

The introduction of this new service is combined with the trial of an "Admissions Pack" with a view to develop a perforated Admission Booklet in the future. This 'pack' contains the elements that are currently required for a patient admission and consists of:

1. Admission booking form (MR71C)
2. Consent form (MR132)
3. Patient Registration form (MR90)
4. Health Questionnaire (MR138)

This pack must be ***completed*** by both the doctor and the family ***prior*** to the patient being added to the RCH waiting list.

What does this mean for you?

1. As a doctor who books patients for admission into RCH *(both public and private patients)* you are required to complete the first 2 pages within the Admissions Pack ***at the time of the patient consultation.***

   Doctor to complete:
   - Admission booking form
   - Consent Form
     - If consent ***cannot*** be completed due to ***one of three reasons listed*** below, a green 'opt out' sticker must be attached to the consent form, then signed and dated.

CONSENT TO BE COMPLETED AT A LATER DATE

Please Specify Reason:
☐ Pending Clinical Results
☐ Legal Guardian not Present to Sign
☐ Surgery not expected within next 6 months

DR. SIGNATURE: **DATE:**

- If the patient is a ***Category 1***, you are required to contact the Pre-Admission Resource Coordinator ***immediately*** upon end of the appointment, and refer the patient to her. The Pre-Admission Resource Coordinator will then either meet with the patient straight after this appointment (the preferable option), or make a time with the family to contact them.
    - If the patient is booked for surgery on the ***same day*** as the consultation, the Pre-Admission Resource Coordinator does not need to be contacted. However, the patient should still have a complete pack of paperwork.

- If the patient is a ***Category 2 or 3***, the family will be contacted by Pre-Admission Resource Coordinator if required, at a later date.

2. The family is then given the pack within the clinic rooms (on a clipboard supplied) and requested to complete the 2 final pages of the pack in the reception area ***on the day of consultation***
    - Patient Registration form
    - Health Questionnaire
        - The PARC Coordinator is available to assist families in completing the forms if required.

3. This pack must be delivered to the Waiting List Officer (No faxing) within two days of the consultation to ensure that patients are on the Waiting List within 3 days.

ESSENTIAL TOOLS AND RESOURCES

Computer

Logon username and passwords are required for the following systems.

FUJI SYNAPSE

This is the web based software allowing x-ray viewing on any RCH computer (PC & IE only).

CLARA

- provides access to all reports for pathology
- provides a list of all current orthopaedic
- on line discharge summary, allows you to save an interim summary

IBA

- provides outpatient lists
- lists patients discharged/treated in the preceding week for x-ray audit purposes

MDAnalyze

Purpose

1. To expand the use of MD Analyze across Surgical Services.

What is MD Analyze (MDA)?

2. MDA is an integrated surgical audit and outcomes database that provides prospective data tracking from diagnosis to final outcome.
3. The database is structured into separate but linked elements that simplifies the interface and minimizes the burden of data collection.
4. Leveraging off the process of accurate data collection is a number of integrated functions that enable the system to become a core clinical tool.

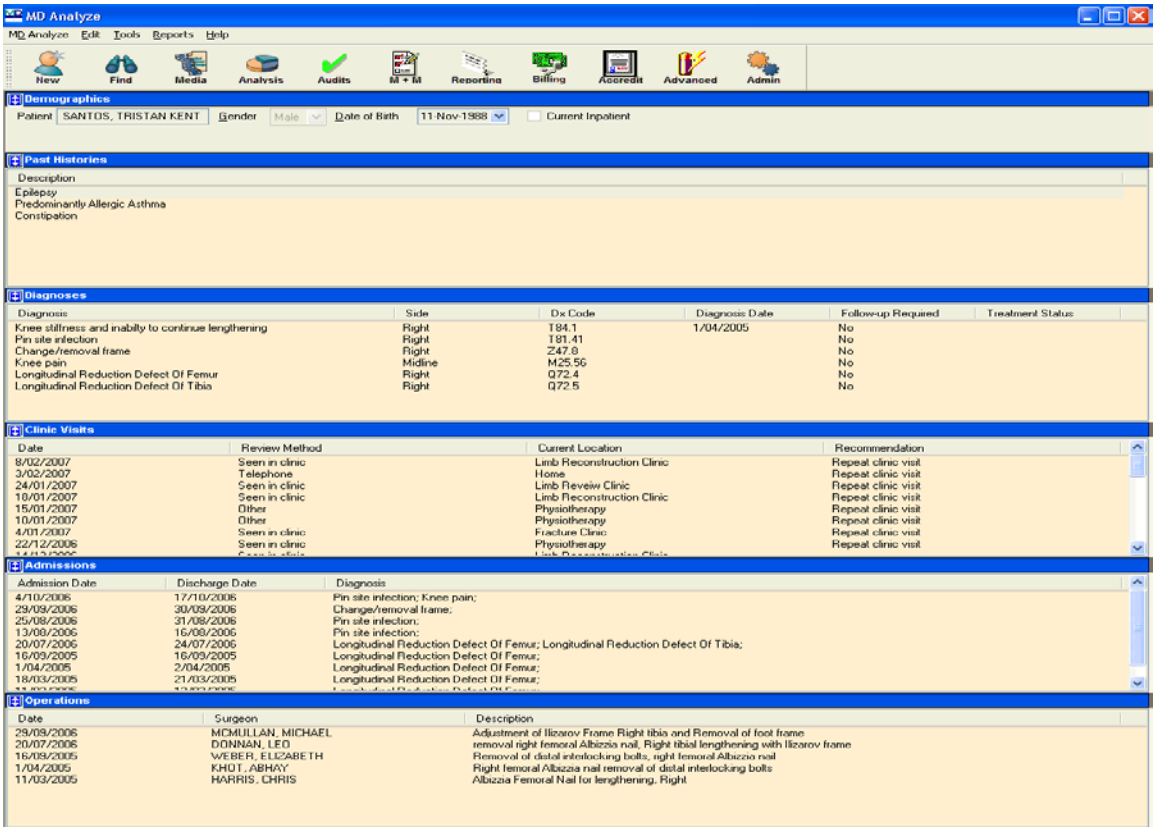
Background

5. MD Analyze has been used in Orthopaedics at RCH for the last 3 years where it has transformed the decision-making process related to the surgical management of patients and has resulted in improved patient treatment and outcomes.

What are MDA's Key Elements?

1. **Patient Overview**

At the highest level the complete medical record of a patient is displayed as a "whole of life" picture. Direct access to the area of interest is possible through a simple mouse click thereby reducing the complexity of record search and display.



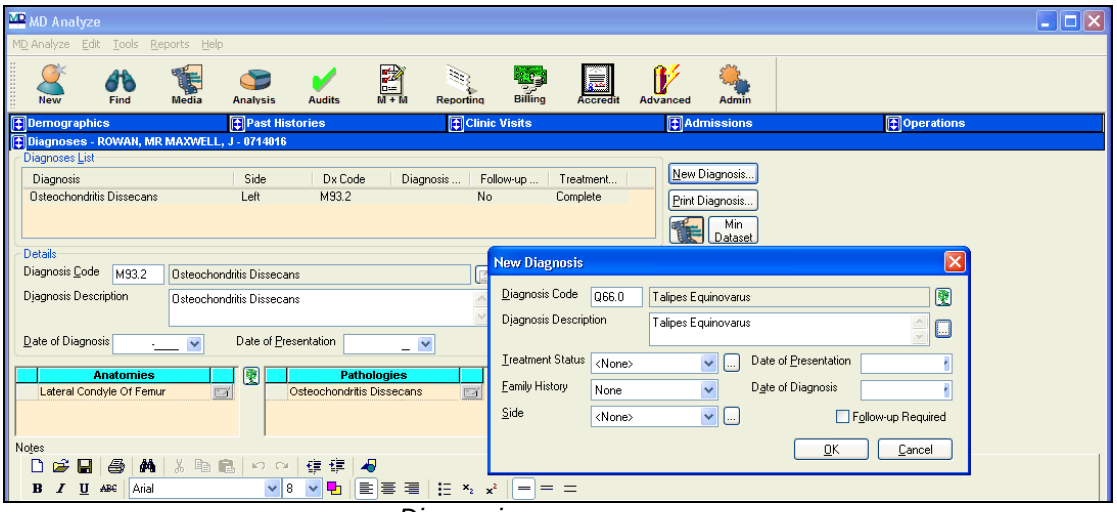
Patient overview screen

2. Demographics

Standard demographic data is automatically collected on patient attendance from IBA but can be collected or corrected manually. Multiple UR numbers can be allocated for different sites which opens up the possibility of tracking patients across hospitals as part of transition.

3. Diagnosis

Central to coding is the ICD 10 system. MDA provides the ability to rapidly drill down through the complicated tables to find codes and has extensive search capabilities. The system displays at the highest level up to 50 of the commonest diagnoses for a particular clinician or department. In its current state ICD 10 captures widely varying diagnoses to the same code, making differentiation between pathologies difficult, in many instances. MDA allows the user to change the code descriptor to something more meaningful whilst maintaining code integrity.



Diagnosis screen

At a secondary level, a customisable three level code set resides, which each unit would develop for their own specialty. The three domains relate to anatomy, pathology and clinical presentation. These codes can be automatically linked to specific IDC 10 codes which rapidly enhance data input. These code sets utilise the same interface as for the ICD 10 code set, which is a feature that is maintained throughout the database.

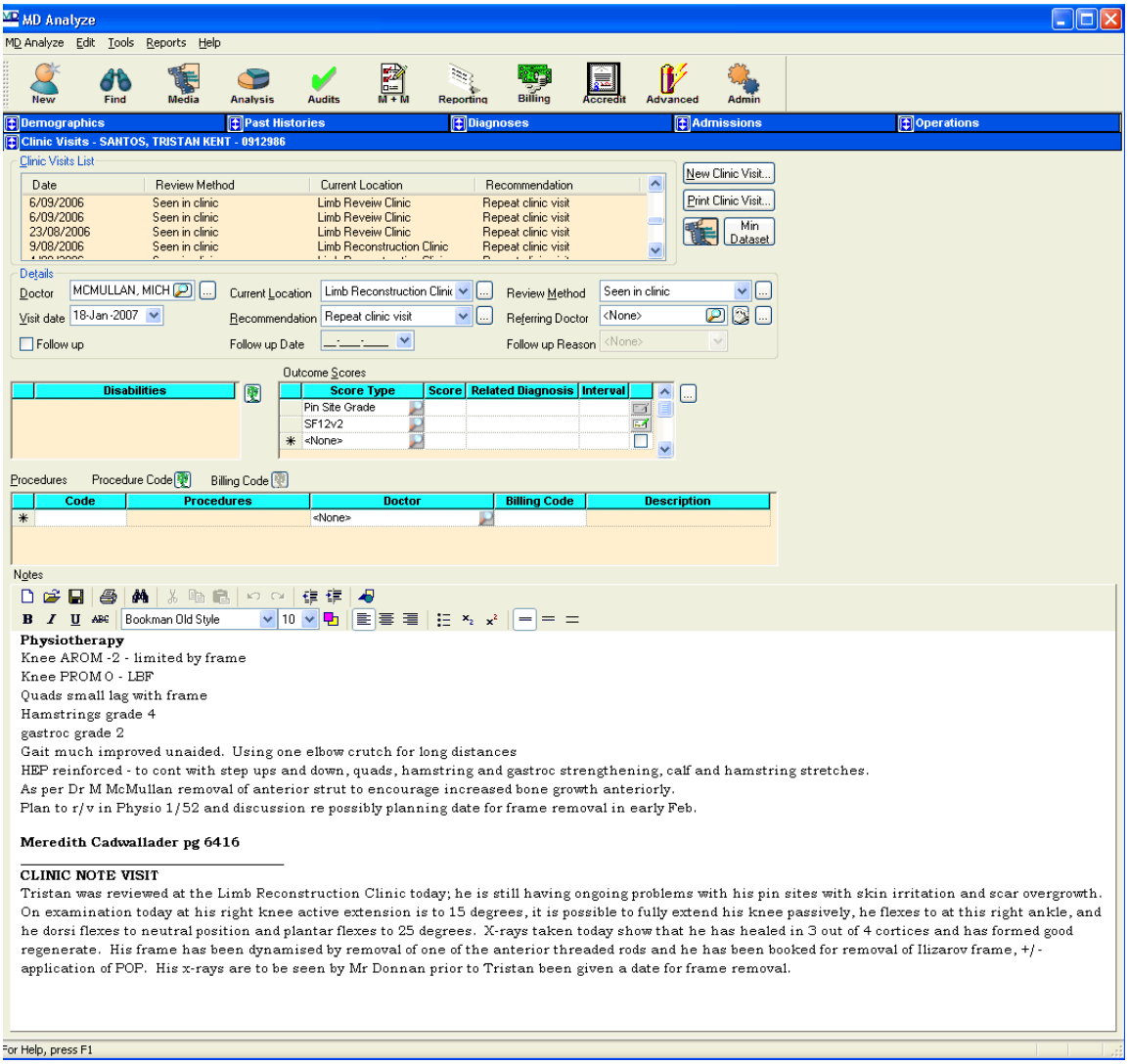
4. Past History

Admission diagnoses may not relate to underlying patient conditions or co-morbidities. This element allows capture of such data in a structured fashion that can be flagged for attention at various levels. Risks, such as allergy, can be identified as part of the Past History.

Combined with the diagnostic coding, the Past History builds up a diagnostic description of the patient that is used throughout the database and at the various levels of reporting. The importance of obtaining accurate coding at this level is core to a well functioning system and a variety of verifications have been integrated both within and outside the database in the reporting structure.

5. Clinics Visits

Clinic visits are automatically loaded into the system, reducing data input. At this level clinically relevant data about the visit are recorded and both custom forms and letter templates are used extensively. Results from investigation can be recorded and tracked over multiple attendances.



Clinic Visit screen

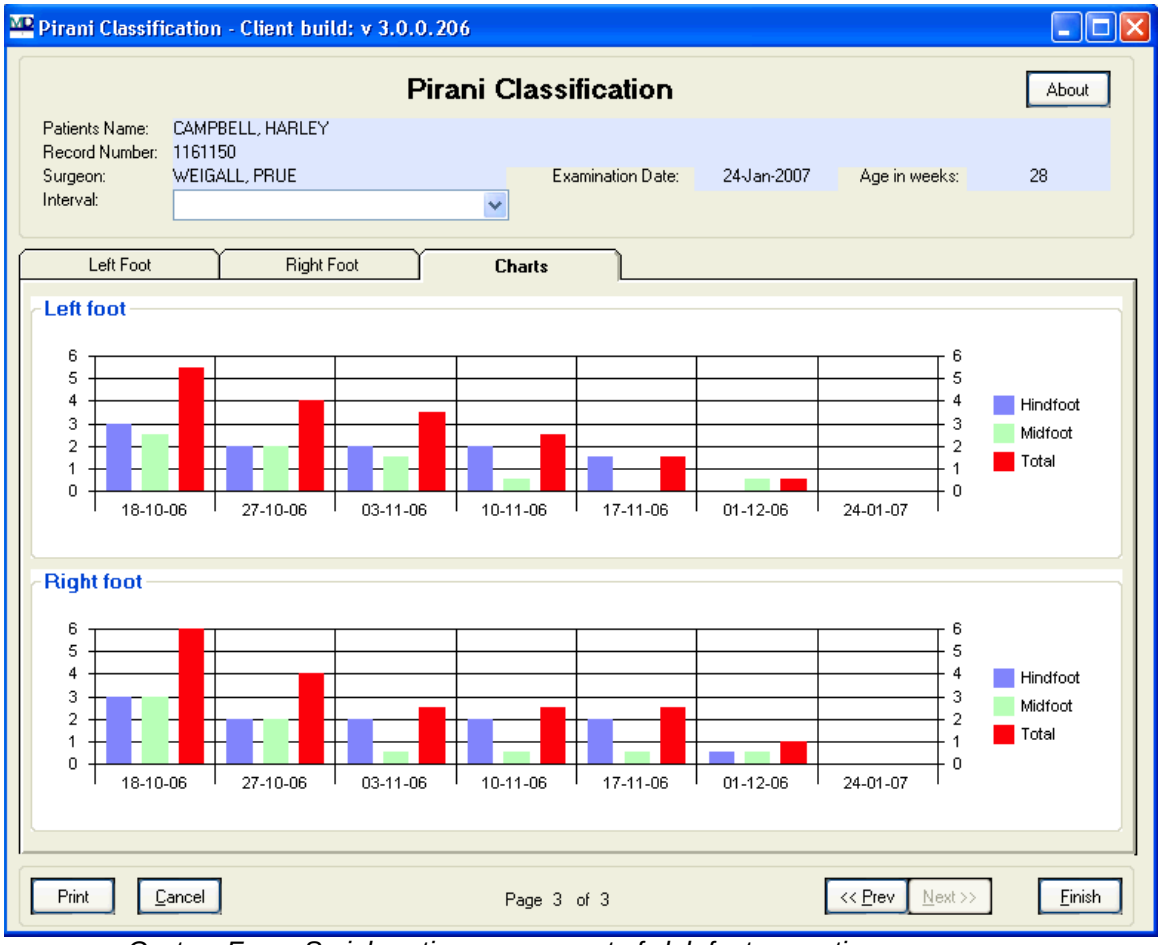
At a visit various data entry solutions are used including condition and patient specific forms, outcome instruments (such as SF36, Child Health Questionnaire) and electronic medical record (EMR). The design and implementation of specific data entry forms is simple.

The Clinic Visit screen can be accessed by multiple practitioners who see the patient on the same or different days. Each practitioner adds to the EMR either simultaneously or sequentially and all involved with the patients care have access to the whole clinical picture. Dictated notes can be added to the record at a later date either as a notes field or as part of the media centre for that patient.

Transmission of clinical progress and instructions to ancillary services such as physiotherapy and Hospital in the Home is greatly enhanced and the reliance upon a

physical medical record is removed. All notes and assessments can be printed on hospital stationary, signed and included in the unit record.

Increasingly utilised is the ability to track the effectiveness of therapy. Custom forms can be structured to collect and display the results of intervention over a period of time and intelligently identify patients whose condition needs intervention. This, and all other, data can be interrogated to develop best clinical practice models.



Custom Form: Serial casting assessment of club foot correction

6. Admissions

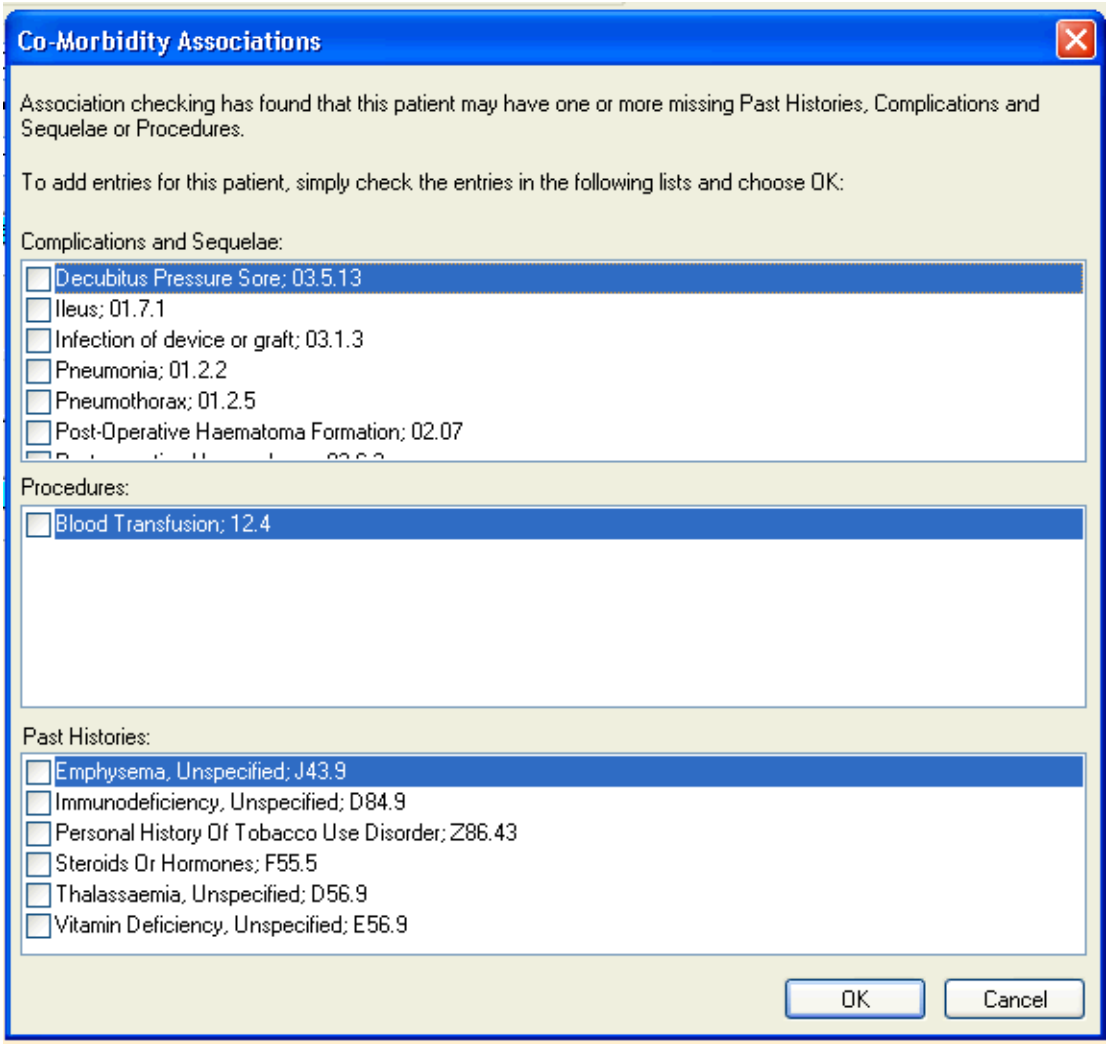
Each patient admission is captured automatically and forms the core reporting element for the tracking of treatment outcome. At admission, the specific diagnoses associated with the event are linked which ensures that diagnostic information is verified and available in the operation element.

All complications relating to the patient's admission and surgery are captured at the admission level not only for the inpatient stay but also in an ongoing manner. Complications can be coded in a variety of ways, separating sentinel events out as a distinct group for which a separate reporting and notification stream can be instigated.

Admission and discharge scores can be captured either as absolute values or as part of a more complex custom form (e.g. Glasgow Coma Scale vs. Patients Satisfaction Survey).

Notes relating to the patient's admission can be captured and discharge letters produced, utilising customisable templates that allow collation of any data within the database (e.g. operation report, outcome scores, follow-up).

Discharge of a patient triggers a discharge screen that specifically asks the user about co-morbidities, complications and non operative procedures. This information is utilised in the final coding of the patients admission.



Discharge verification screen

7. Operations

Operative data is collected at a number of levels. Each operation has a free text description that encompasses the whole procedure but also has a detailed coding. The detailed code set is customisable but has a design structure that incorporates generic, site specific and subspecialty procedures. This structure is flexible and accurate, truly reflecting clinical practice rather than the standard grouped structure that flattens reporting. Operation codes are linked to CMBS codes that are also captured at this level.

Custom forms are used extensively and are automatically triggered by a specific operation code defined by the users. These forms allow rapid data entry that is specific for an individual procedure and can add at least five levels of complexity.

Operation reports are either typed directly into the database or one of the numerous departmental templates utilised. These templates can be flexibly developed and integrated into the database and continue to increase in both number and complexity.

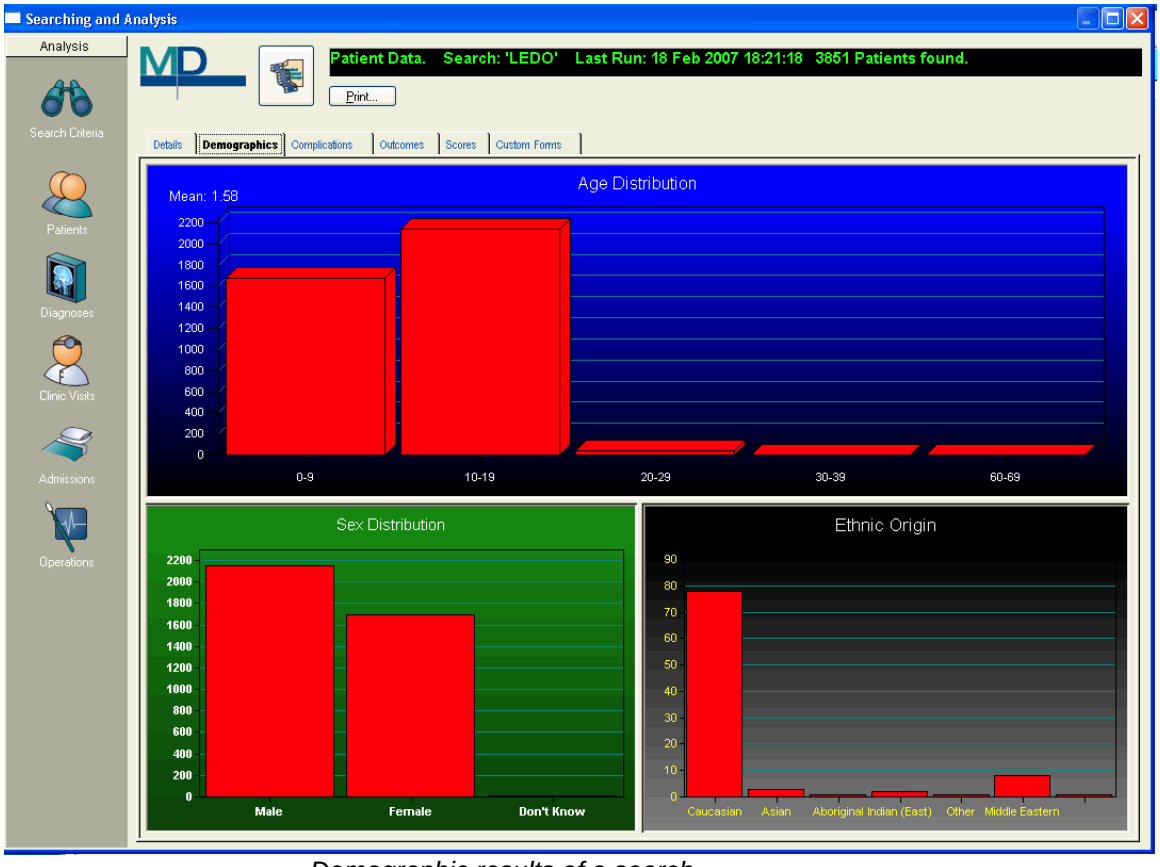
The printed operation report collates information from throughout the database, the operative note, custom form and includes a universal postoperative order. This order sheet is, and continues to be, dynamically modified through input from clinicians and nursing staff to ensure the highest quality of care is provided to patients post operatively in a consistent fashion.

8. Custom Forms

The concept of custom forms is to provide a method by which specific information is able to be entered into the data base with minimal effort on the part of the user. This can be either as a simple flat form or a complex integrated tool that can collect and present a wide range of elements from across the database to help with a patient's management. These forms can be developed in-house to a sophisticated level or as a one-off product by MDA if the requirements are unique.

9. Analysis

Central to the MDA database is the ability to perform complex analysis at a user, department or division level. Every field within the database is analysable through this element of the system. Complex queries can be run without specialist knowledge and the output is displayed in a dynamic fashion allowing direct links back to the records found. This output can be directly exported into a variety of statistical packages for research level analysis.



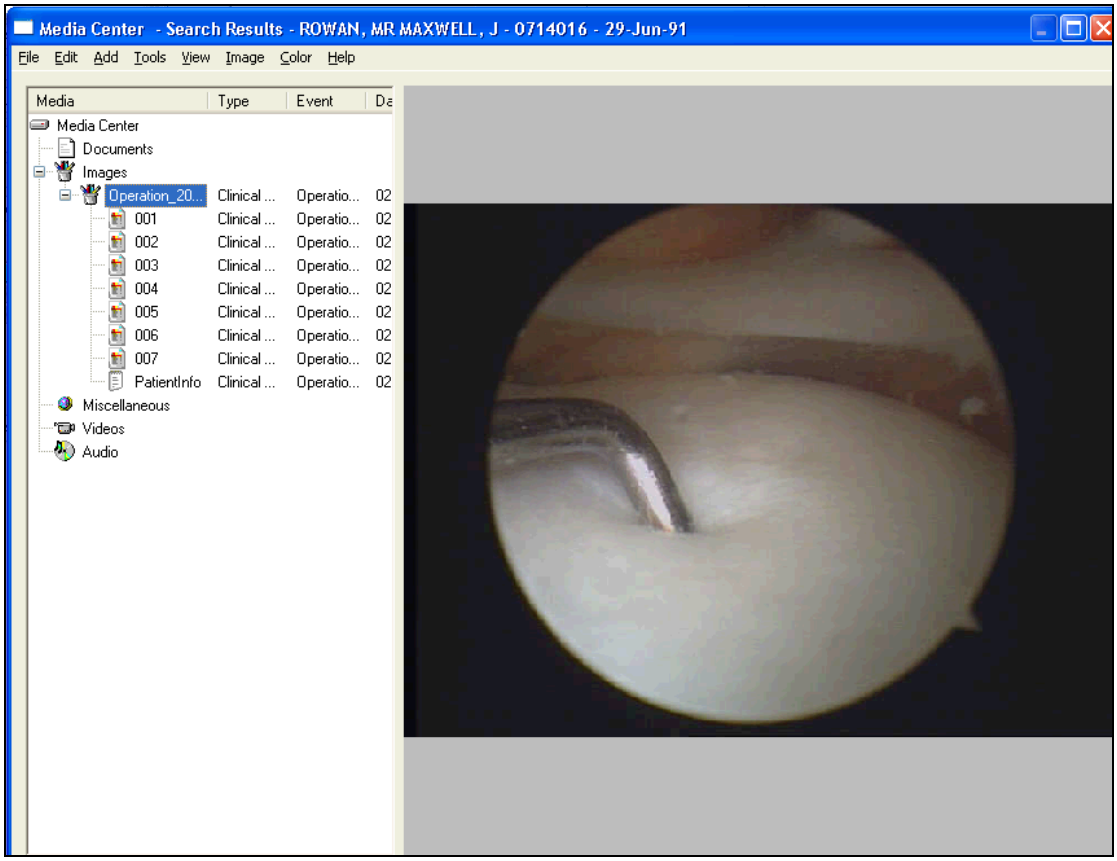
Demographic results of a search

Searches allow collation of clinical images, custom form data, results, outcomes and complications.

10. Media Centre

Each element of the database has a direct link to the media centre where documents, clinical images, radiographs, movies and audio files are stored.

The MDA data collected on an individual patient is essentially tagged to each media type for that individual. Queries run in the Analysis element allow the collation of all the multimedia for a particular question which can be utilised both in research and teaching.



Captured endoscopic image linked to patient file

The Media Centre provides a secure repository for disparate multimedia and a seamless way in which this can be collected into a patient record making it available throughout the clinical environment in a controlled fashion.

11. Reporting

Specific reports are available in each element with respect to the individual patient and can be customised extensively to match current hospital practice.

At a higher level there are standardised reports relating to activity, audit and outcome. The structure of the database allows an unlimited number of standard and ad hoc reports to be produced utilising the Crystal Reports product.

12. Security

Data base security is achieved at four levels:

a. Integrated hospital backup strategy as for all key systems
b. Personal password logon managed at an administrator level
c. Hierarchical control of data visibility
d. Full audit trail for each data entry and interrogation

In a cross department environment, data visibility is managed according to business rules in order to protect patient and clinician confidentiality.

13. Integration

a. XML

An integrated product (MDA convert) allows output from IBA in the form of an XML file to be used to capture patient demographic data according to defined rules.

b. HL7

Until recently, it was unclear which version of this messaging system was to be the hospital standard. MDA has the ability to utilise HL7 messaging which would provide a more dynamic environment in which to operate. This is the preferred method for any future development.

c. Data Warehouse

The concept of a data warehouse would greatly enhance the reporting capacity and quality of the hospital. Data from MDA could be utilised for a variety of comparative reports and to ensure the reportable hospital data is accurate. This concept would greatly increase our ability to understand the true clinical implications of our work at a number of levels and bring in new data that has not been traditionally captured by hospital systems.

d. Crystal Reports

This is a flexible, well-used and understood product that allows unlimited types of reports to be generated.

e. Microsoft Office

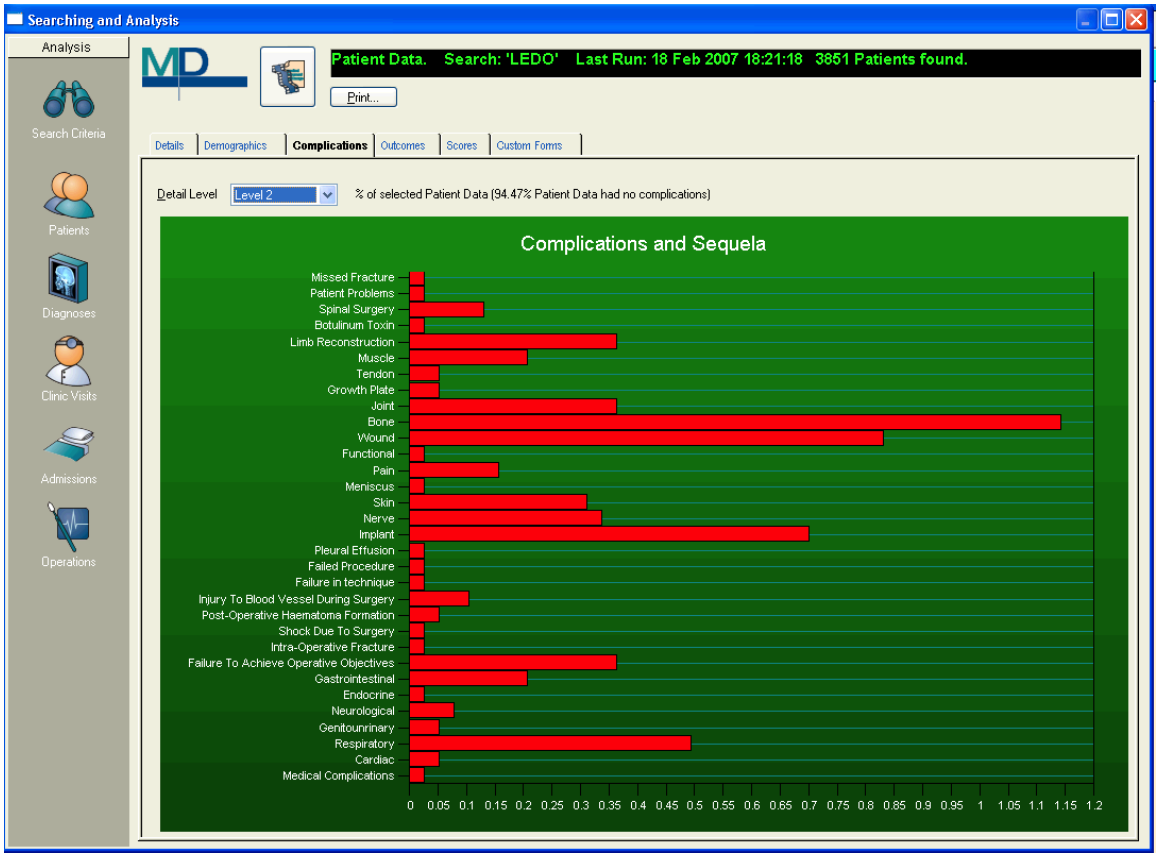
It is compatible with all components.

What are MDA's Key Advantages?

1. Clinical Audit

It is a mandatory requirement that all surgical units undergo a process of continuous clinic audit. Audit at the Royal Children's Hospital is woefully inadequate and has been identified as a significant risk for the organization. At present the orthopaedic department utilising MDA is the only unit that has a sustainable and acceptable process.

Audit should consist of an analysis of work load, case mix, complications and morbidity. It enables early detection of trends, credentialing of clinicians as well as allowing system and procedure failures to be detected and addressed.



The ability to have a single entity by which these processes are addressed would produce a level of transparency and quality the organization has not been able to achieve whilst at the same time enabling evidence based changes to clinical practice to occur.

2. Research

There is considerable organisational anxiety about the multitude of clinical research databases that are unsecured and utilised for the delivery of clinical care. MDA offers the ability to integrate these databases into a single site that can be monitored and protected.

The tools within the database greatly enhance researcher's ability to work, and provides a perfect device in which to perform prospective trials and outcome studies.

As a hospital wide system, the overlap in data collection between units can be reduced and major efficiencies achieved. Repeated patient recruitment could be potentially

reduced and standardised outcome measures, such as the Child health Questionnaire, applied to broad groups.

Benchmarking to other institutions both in Australia and Overseas would then be possible at a much higher level, as the data captured for clinical practice would have a far greater level of scrutiny if it is being integrated into ongoing clinical research.

3. Hospital Coding

Accurate hospital coding is an essential activity for the financial viability of the institution. The MDA database offers a unique opportunity to have valuable clinical input at the core of this process and move away from the reliance of the medical record.

MDA allows coding information to be collated into a single report. Once fully operational as an operating and discharge reporting system, all the elements for electronic coding are in place.

By integrating the database into clinical and research practice, the quality of information is greatly enhanced with the potential to produce a true understanding of paediatric complexity issues.

4. Credentialing

A standard methodology for credentialing departments and individual clinicians has not been instigated at Royal Children's Hospital. The Collage of Surgeons has recently asked the hospital to consider the need to include evidence of Continued Professional Development (CPD) as part of the process of appointment and reappointment. Central to the CPD is evidence of self audit and evaluation. MDA provides this facility seamlessly, with the additional benefit in helping define the individual clinician’s scope of practice, combined with the ability to follow any introduction of change of this scope in a prospective manner.

5. Standardisation

There is an argument that standardised clinical tools improve efficiencies of work and the safety of the work environment. Residents and registrars who may move between surgical units not only have to learn new clinical skills but also new process and procedures. Working within a similar environment with a standard set of tools would decrease the effect of the “New Job” and ensure that excellence in clinical data entry and reporting is consistency achieved.

6. Patient Safety

Standardisation of clinical practices has been shown to be an important issue in relation to patient safety. MDA would allow Surgical Services to set minimal standards for patient care in a variety of areas. Universal Post Operative Orders are such an example whereby a consistent approach both in content and format would ensure that patients received a reliable level quality post operative care. Departments would be able to develop and implement treatment algorithms efficiently and monitor outcome accordingly.

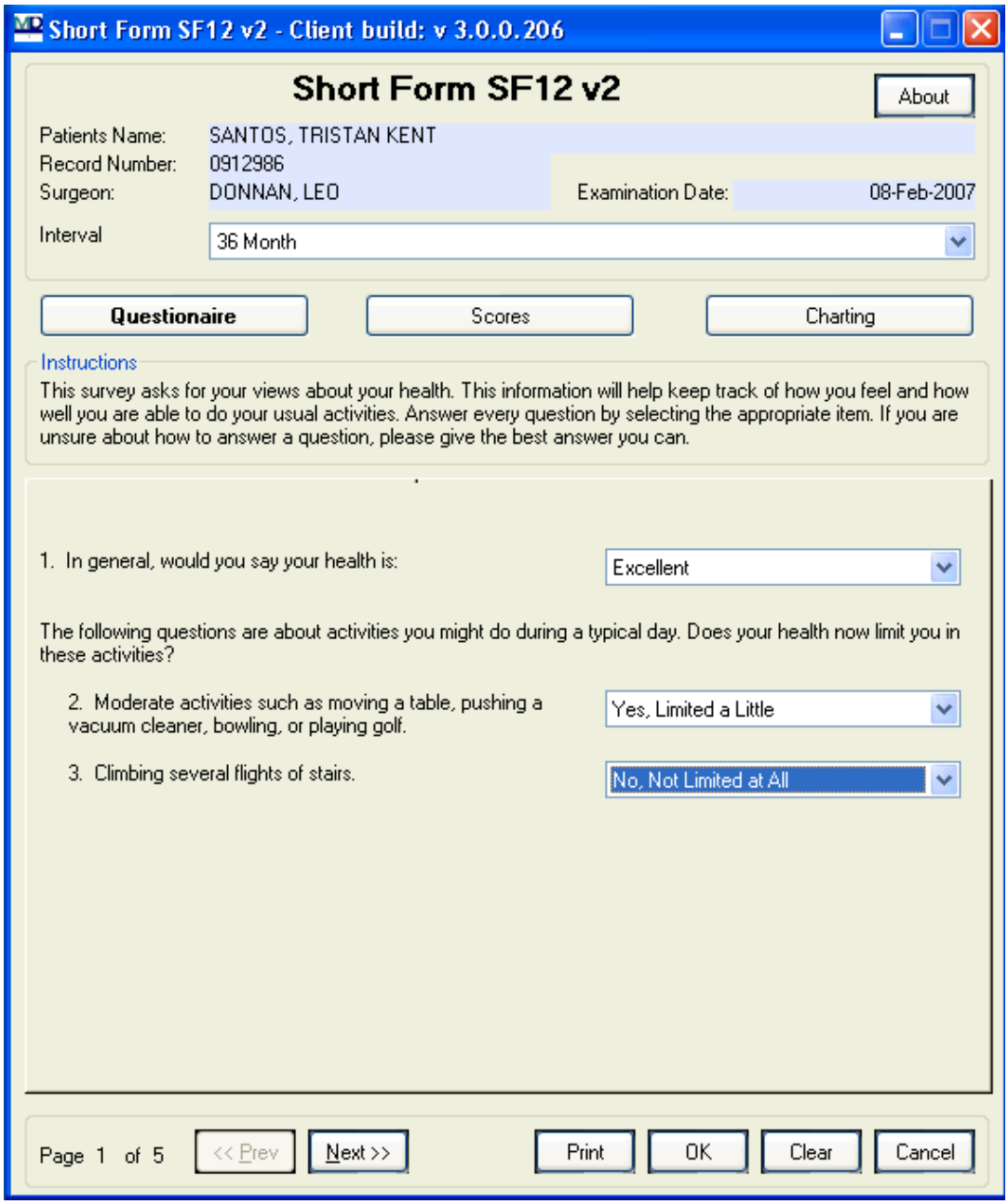
The ability to have the full medical record available at each point of contact with a patient can ensure that no decision on patient care is made without the medical record being present. In the current environment the paper based medical record is often disassociated from the patient, leaving gaps in clinical knowledge when treatment is being applied.

7. Culture change

In the move to a digital hospital it has been recognised that one of the most important enablers is not the technology but the engagement and buy-in of the practitioners that use the technology. The introduction of MDA across Surgical Services gives the hospital the ability to explore the emerging technologies, although recognising that MDA is not the full solution in a digital environment.

Experience gained in this environment will help change the culture of surgical practice as is evident in orthopaedics. Clinical meetings have changed in nature with a far more objective focus being evident. Referral to the database for the answers to clinical questions occurs daily and staff both within and out of the unit rely on information contained. At a ward level there is consistency in Post Operative Orders and improved involvement of the nursing staff, who now expect information to be available at all times.

The MDA database gives us the opportunity to investigate different models of patient care from how we run a preadmission clinic through to discharge planning.



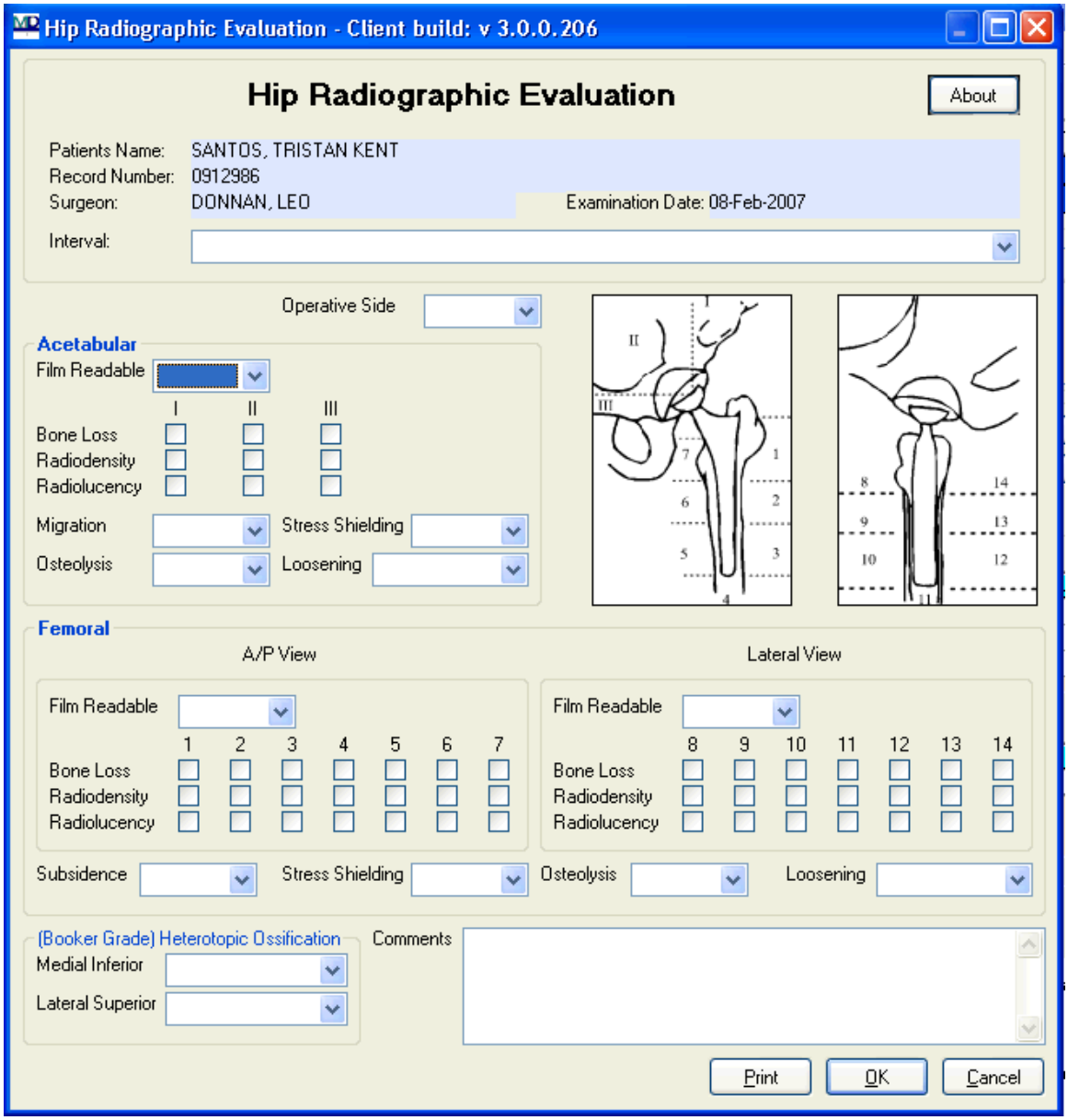
Outcome based custom form

8. Efficiency

Repetitive entry of data into multiple sites needs to be minimised if new technology is to be taken up by the medical fraternity. Working in a familiar environment for most of the daily tasks is a way of improving efficiency in a complex world. A move to an EMR improves access to clinical information and potentially improves the speed at which health care can be delivered.

The use of templates for outpatient letters, discharge summaries and operation reports is an efficient and safe practice and once linked to electronic transfer of information, improves longitudinal patient care.

Custom forms greatly improve the ability to enter data in complex situations and can be triggered by a variety of database events to ensure completion.



Complex custom form

9. Education and Training

Access to educational material is greatly enhanced by MDA and the ability to manage multimedia provides rich sources of subject matter.

Central to the reporting function of MDA is the ability to produce registrar and consultant operative log books, as the role of each clinician during surgery is defined in the operating element of the database. This feature is a considerable incentive for both groups to ensure that data entry is of the highest quality.

10. Care Pathways

In their various forms, care pathways are usually seen as a noble ideal but a limited clinical reality. A Surgical Services wide implementation of MDA would allow defined care pathways to be developed, that would enhance the communication between departments and more efficiently manage patients. Trauma cases often have multidisciplinary input, which can lead to fragmented care. Cross unit care pathways could be developed, to direct the delivery of care and ensure that patients are truly managed under multiple bed cards without becoming “lost” under a parent unit.

11. Transition

Collation of information from a single unit or multiple units through a care pathway could enhance the process of transition. Mechanisms exist whereby individual units/clinicians can be notified of the intention to transfer and their input through MDA can be requested. This may be as simple as a form letter or a complex summation of the whole medical record as a report.

12. Discharging

Timely production of useful discharge information is essential for hospital coding and for communication with the patient’s general practitioner and/or physician.

It is possible to use templates with instructions for discharge and aggregate this with free text and collated information from the database (e.g. operation report). This is an efficient method, again maintaining a single working environment and consistency of information gathering and distribution.

13. Proven technology

The Orthopaedic Department has successfully integrated this system into its own clinical practices and now has over 9,000 patients within its database. There is an active ongoing process of enhancing this system at all levels of care and the experience that we have gained so far has given clear guidance about which areas need further development.

Mundane information, such as demographic details, is downloaded directly from hospital systems for both inpatients and outpatients. Efficiency of data input is greatly enhanced by the ability of MDA to learn repetitive entries and to present information in a rapid drill down format, to move through what would otherwise be complicated tables.

In order to develop the database as a core utility for all departmental activities, a number of essential clinical processes have been integrated to ensure standardised care and unambiguous lines of communication between staff at all locations and at all levels. A robust operating report system has been initiated utilising a combination of templates and standard order forms that address the key issues relating to safe post-operative care, ward management and discharge planning. This process ensures that high quality information is passed on to relevant staff and this is available at all points of patient care, both in paper and electronic form. Clinical correspondence and outpatient notes are

entered directly into the database, as are all clinical images, key radiographs and investigative results.

Weekly department meetings review the previous week's cases, both radiologically and from an MDA discharge report. Coding is checked and complications or adverse events are noted. The database manager attends the meeting and ensures that any gaps are addressed and any database issues addressed.

The central role of the database manager cannot be stressed enough. The manager is key in ensuring that data integrity is maintained, error logs kept and addressed, staff trained, reports and custom forms developed and security ensured. The manager works closely with the full range of clinicians and ancillary staff, also acting as a conduit between MDA and the IT department at the hospital.

MDAnalyze Overview

What is MDAnalyze?
MDAnalyze is a 3rd party application used by the Orthopaedic Department to capture a sub-set of clinical information about orthopaedic patients.

What information is captured?
MDAnalyze captures demographic, admission, diagnosis, operation, complication and clinic visit information for orthopaedic patients.

How is the information used?
Print operation reports
Share clinical information between departments
Management reporting and audit
Produce log book for registrars
Produce periodic reports

Who enters the information?
Demographic, admission and clinic visit information is automatically loaded into MDAnalyze from IBA, the patient information system used by RCH.
It is the registrars and fellows responsibility to:

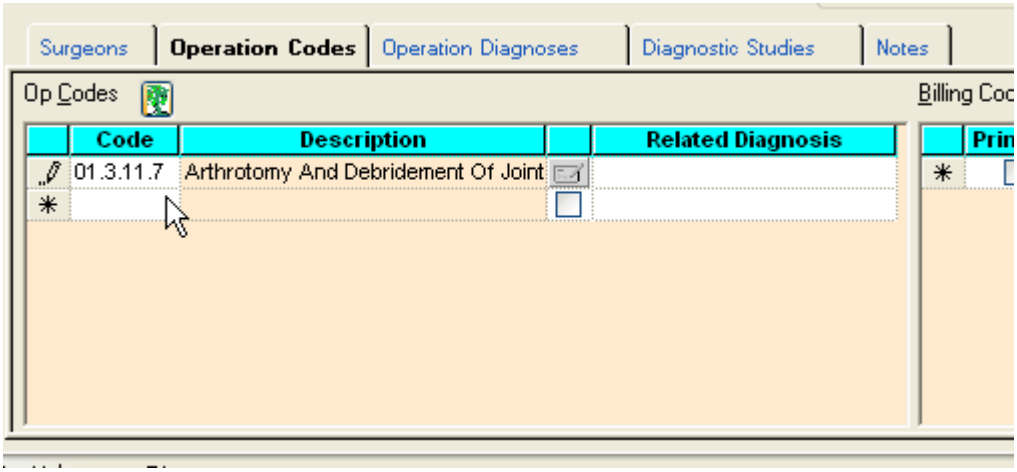
- enter diagnoses
- enter and print the operation report for all public and private operations
- enter admission notes for non-surgical admissions
- enter all complications of a nature that would be discussed at orthopaedic Mortality and Morbidty (M & M) meetings

Orthopaedic physiotherapists and clinical nurse specialists are responsible for entering and printing clinic visit notes for their outpatient appointments in MDAnalyze.

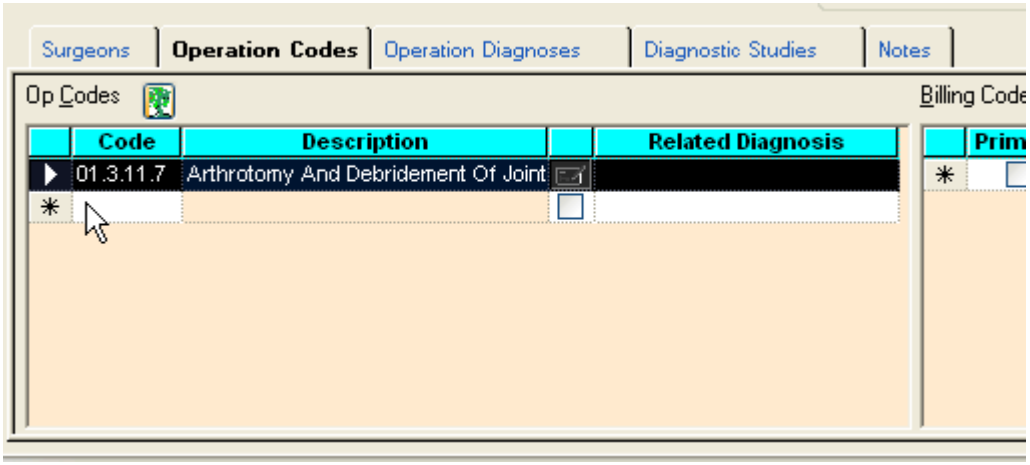
Your user account
You should have been issued a user id and password to log on.
Your user id will be the first 7 characters of your last name and the first character of your first name. For example SMITH, John would be SmithJ, (this should be the same as your Windows user id if you have one).Your MDAnalyze user id is not case sensitive.
If you forget your password, call Rod on X5443 to have it reset.

Tips

Saving and changing data
Within screens MDAnalyze allows you to add, change or delete data at any point in time. Generally there are no add, modify or delete button that you need to press. As soon as you complete a task, such as adding an operation or during field entry, move off that field, that data is saved.
For example if you have entered diagnosis data incorrectly you do not need to delete that diagnosis and start again. Just change the incorrect data.
If you are entering data into a row of data, you will see a pencil displayed which indicates that you must move of that field before it is saved. When the data is saved, the pencil will disappear.



To delete a row of data, you must highlight that row and press the delete key on the keyboard. Before you can delete a row, the data must have been saved ie the pencil must not be displayed.



Common Functions

Printing Reports
The main reports used are the Clinic Visit and Operation Reports. To print these reports, go to the relevant screen and highlight the clinic visit or operation you want to print. Press the appropriate print button located towards the top right side of the screen. The report will be displayed in print preview mode. Press the print icon on the print preview screen.

Add a Patient
The demographic details for all patients with an orthopaedic admission or outpatient visit should already exist in MDAnalyze. If you need to add a patient, you do this via the *New* button on the left hand side of the main menu or the '*New Patient'* button on the Find screen. Add all details including patient record number and press *'OK'.*

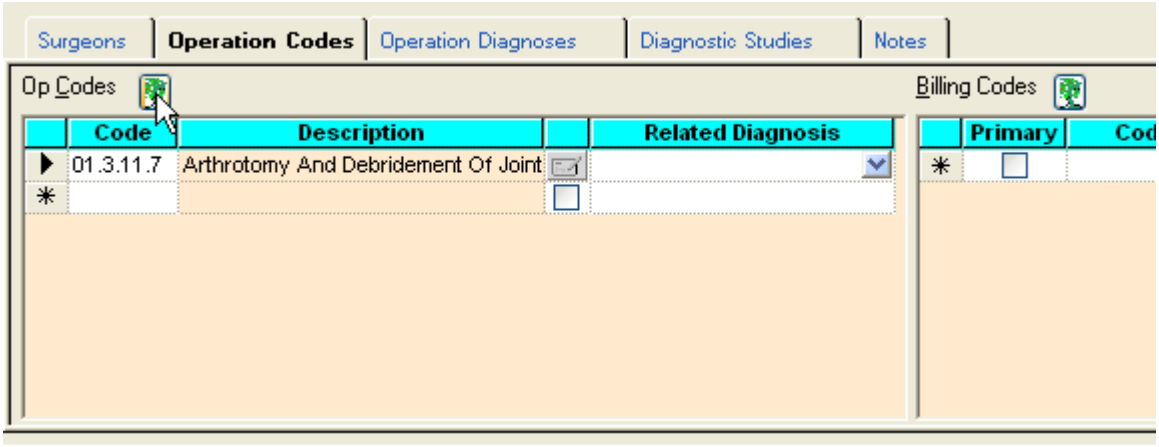
Search for a patient
Press the *'Find'* button on the top left side of the main menu. This will display the search screen. Enter your search criteria and press the *'Search'* button. All the patients that match your criteria will be displayed in the search results. Highlight the patient you want and press *'OK'* button or double click the desired patient.

Add a clinic visit, admission, diagnosis or operation
The admission data for all patients with an orthopaedic admission (but not clinic visits for outpatient at this stage) should already exist in MDAnalyze. If you need to add one, press the

'*New Clinic Visit'* or '*New Admission'* button on the top right side of the relevant screen. An admission and operation is added in the same way.

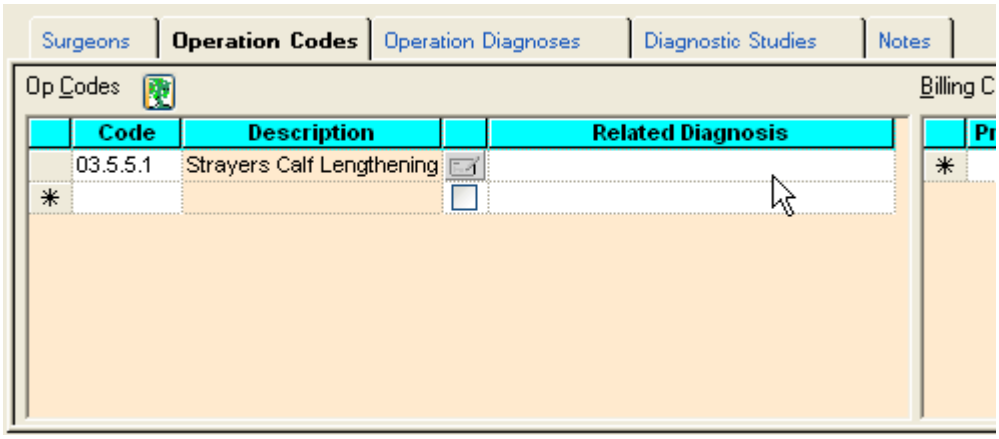
Selecting a code

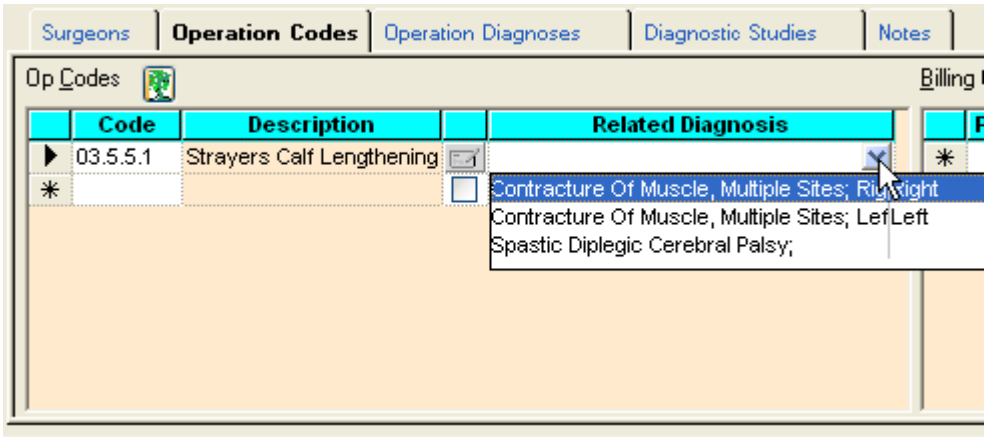
Examples of the codes used in MDAnalyze are diagnosis codes, operation codes and CMBS codes. When a field is required to be selected by a code, you will see a button with a tree icon. This button will open a search screen which will allow you to search and select a code. In the example below, you can see the code selection buttons for operation codes and billing codes.



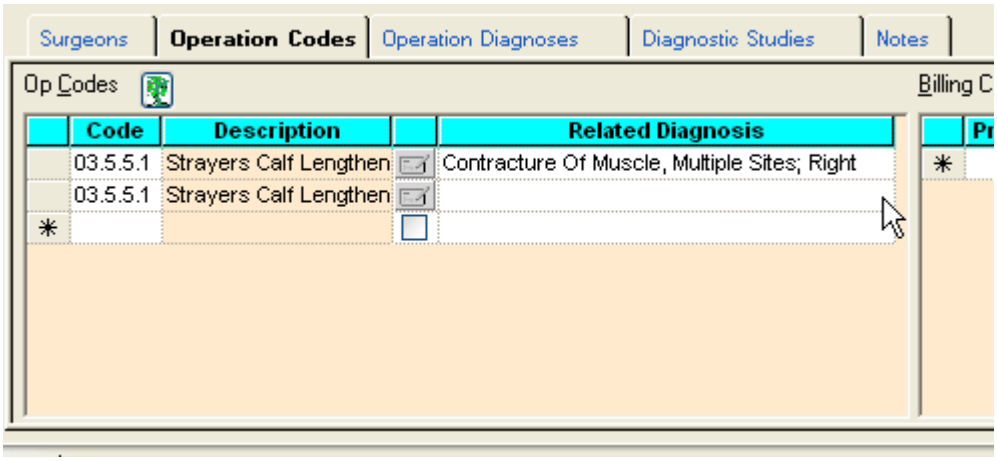
Activating a list

There are fields that look like text boxes but are actually list boxes. The list box arrow is not activated until you click on the far right hand side of the field. When the arrow appears you can select the relevant item from the list.



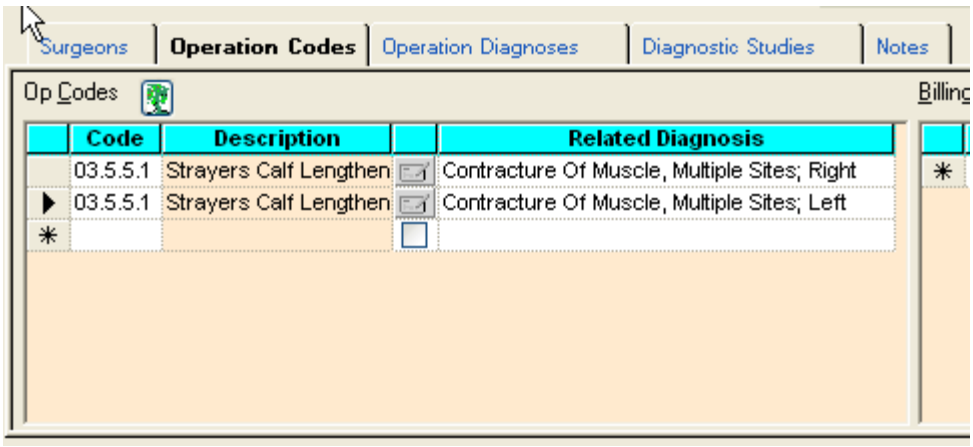


Order of entry
When you see a data entry set like the one below, it is best practice to work from left to right completing each row before you start the next row. If you don't work left to right there are known bugs that may pop-up erroneous error messages.

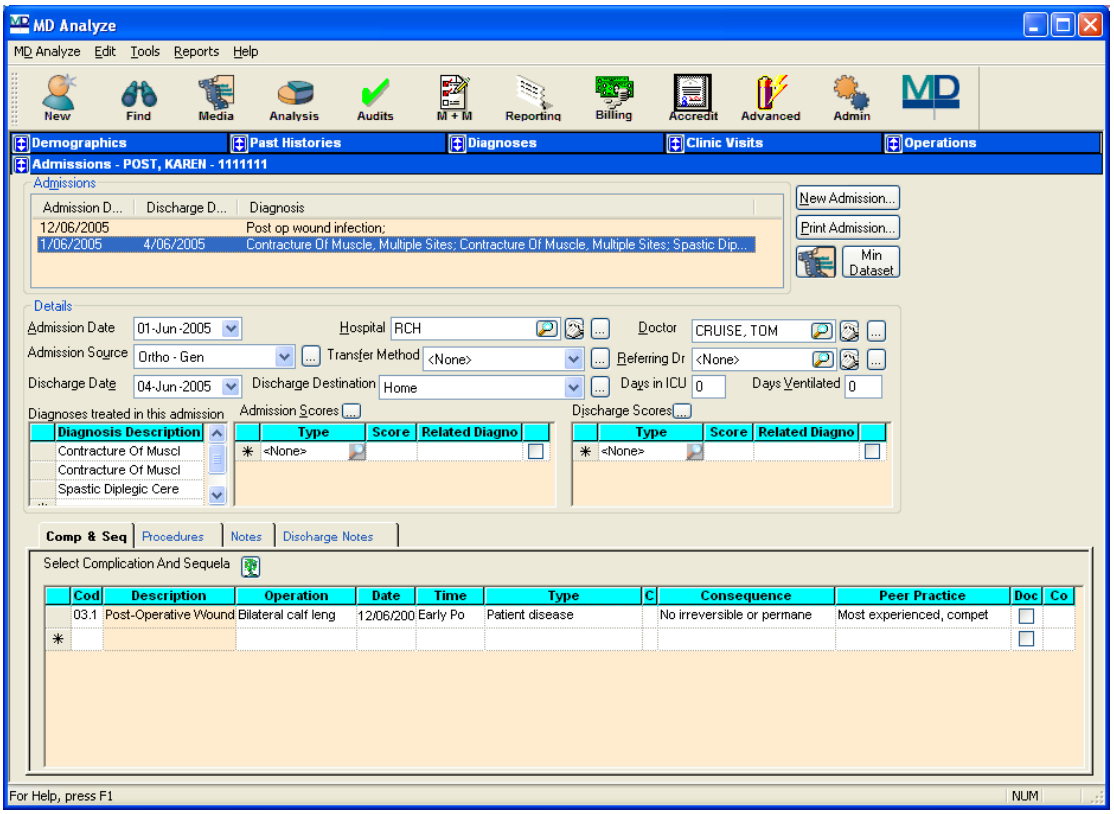


Multiple Billing Codes
The same billing code can only be entered once per operation. Instead of entering the billing code twice for example when a procedure is performed bilaterally, use the operation code to show this.

Related Diagnosis
A related diagnosis must be entered (as a justification) for every admission, admission score and procedure and can only be selected from those already added. You cannot have the same operation code and same diagnosis entered more than once.
For example if the same procedure is done bilaterally, then the operation code would be entered once for each side with a diagnoses representing each side.



Recording Complications
Complications are recorded against the admission they occurred in. In the example below, the patient was admitted on 12/06/06 for a complication that occurred as a result of an operation during the admission period 01/06/2005 – 04/06/2005.
Note: You need to record a diagnosis for the complication and associate that diagnosis with the admission for the complication.



Operations

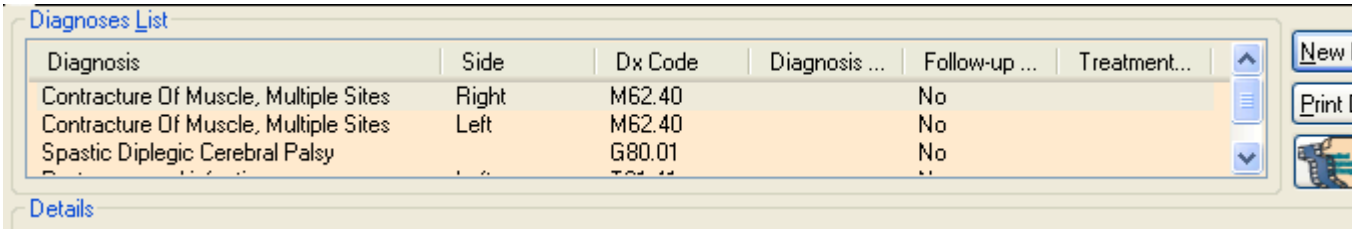
An operation report needs to be printed for each private and public patient. The operation report also contains the post-operative nursing and follow-up instructions and should be handed to the nurses in post-op. A sub-set of operation information must still be recorded in HAS the RCH theatre system.

The basic steps for completing an operation report are:

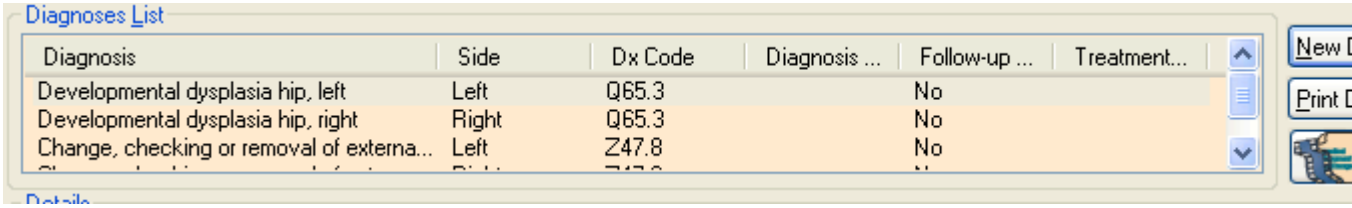
1. Add the appropriate diagnoses for the patient.
2. Associate those diagnoses with the admission.
3. Add an operation and complete the operation details.
4. Print the operation report and give to nurses in post-op.

Diagnoses

The diagnosis codes are the ICD-10 diagnosis codes.
If the diagnosis is bilateral, then a diagnosis is added for each side
If the diagnosis date is known, then this should be added.
Add the anatomy, pathology and presentation if it adds meaning to the diagnosis.
If a patient has multiple admissions for the same diagnosis for example botox injections for cerebral palsy patients, a new diagnosis is not added for each admission.
For these patients the diagnoses would be:



An example of the diagnoses for a patient with bilateral hip dysplasia.



** add an example for removal of casts/internal fixation.

Discharges
CurrentlyDischarge Summaries are printed from CLARA. The discharge date is entered in MDAnalyze by Orthopaedic Administrative staff.

Past Histories
This function is not currently used. All diagnsoses which could be considered a co-morbidity such as Cerebral Palsy and Diabetes for example are added as a diagnosis via the Diagnosis screen.

Clinic Visits
Clinic Visit details are not automatically loaded into MDAnalyze via MDAConvert the same way that Admissions are loaded.

Other features

Analysis Tools
A reporting function exists in MDAnalyze that allows you to create and run your own queries. You can view, print or export the results of your query.
Click on the Analysis icon on the main menu to display the 'Searching and Analysis' screen. You can re-run an existing query, create a new query or just view the results of a query that has already been run.

To create a new query, press 'new' button. To indicate that you are the owner, append your initials to the start of the query name. If you sort the list, you will then see all your queries listed together.
A list of data will then be displayed. Use this list of data to construct your query.
Once you have built your query, press the '*Run*' button. The results of your query can be viewed by clicking on one of the icons listed on the left side of the screen. For example, clicking on the '*Admissions'* icon will display the admission details that meet your criteria.

To re-run an existing query, highlight that query in the list and press 'run'. Note, the date the query was last run is displayed in the search list. If you don't press the run button, the results you see will be the result as it was at the date last run.

To export the results of your query, right click your mouse when viewing the data you want to export then follow the prompts.

Log book
A Registrars log book in the format required by the Australian Orthopaedic Association can be printed from the data in MDAnalyze. The data in this report is based on billing codes and surgeon capacity. See the MDAnalyze administrator to get a copy of this report.

Media Centre
This feature allows you to store documents, videos, clinical images and other forms of media. A media item can be associated with a patient or with a specific operation, admission or clinic visit. For example, clinical images of an operation should be associated with that operation.
To view all media items associated with a patient, click on the Media icon on the main menu.

Reporting Application - Ortho Reporting System ORS.exe
Use this application to print the previous weeks Admission/Operation Report and the M&M (Complication) Report.

From the menu, select 'Report', then 'Open' then the report you want to run. Once you have entered the report parameters, press the lightning bolt icon to run the report. If you change the parameters, press the 'lightning bolt' to refresh the report.

For more detailed refer to:
Orthopaedic Department User Guide MDAnalyze
Available from the RCH Intranet:

RCH departments > Surgery > Orthopaedics > Intranet resources > MDAnalyze help > MDAnalyze Users manual

The document: MDAnalyzeUserManual.pdf
can be saved or printed for your reference.

On the desk top beside the MDAnalyze icon (the live system) is MDAnalyze Training icon (a training and test account) you can use, please don't confuse them and MDAnalyze On Line Training a web based on line training module.

RADIOLOGY

Radiation Safety

All staff are provided with radiation badges and are expected to wear these in theatre. A radiation safety course is being developed by the department and will be available soon.

Ordering Investigations

An extensive manual of radiological investigations and their interpretation exists for the orthopaedic department. Please refer to these notes if you are unsure.

LINK TO RADIOLOGICAL HANDBOOK (DR YOUNGS ET AL) – COMING SOON

Request Forms

All forms must be signed and clearly identify the person ordering the test. MRI scan require a consultants signature.

CT

MRI

Ultrasound

Bone Scan

Interventional Radiology

Image Intensifier

Theatre access to image intensification is via the theatre radiographer. It is customary to assist in the set up of the II but under no circumstances should anyone other that a radiographer use this equipment. Significant fines for the individual and organisation exist if a breach of the policy occurs.

RESEARCH

TIPS FOR MAXIMISING ENJOYMENT, EDUCATION

Personalise management of a patient to one person. Preferably the person who was involved in the operation. Also ensure that individual inpatients are linked to an individual consultant

Work as a team. Use the morning round to coordinate the days activities and talk to each other to cover all of the required work.

Cover each other. eg. Unrostered individuals can help an on-call person who is rostered to theatre by covering the emergency calls. This can save immensely at the end of a day if cases are already booked and prepared for evening theatre.

MAXIMISING EDUCATION OPPORTUNITIES

Get active in the preoperative planning. Registrars and Fellows are welcome to book patients from the waiting list in discussion with the relevant consultant. Examine the available radiology and plan the surgery prior to the Wednesday planning meeting. This not only gets you actively involved in the thinking process of paediatric orthopaedics, it also makes it much more likely that you will be actively involved in the performance of the operation.

Ward round. On formal ward rounds present a one sentence summary of a patient including the presentation, treatment and progress of a patient, and then an outline of the ongoing plan. This helps everyone participate in the process and can raise questions which are of educational value.

Surgery. A good way to ensure never seeing the right end of the knife is to turn up to an operating session and say "what are we going to do today?" In other words you need to think well ahead of an operation and do some pre-reading, pre-discussing or both. Active participants will be directly involved in performing operations.

Outpatients. Get to the outpatient session on time and preferably ahead of the consultant. Find the new patients and start seeing them. Present new patients with an outline of presentation, relevant findings and your plan. This gets you thinking outside of what may be already written down in a chart and is most likely productive ground for teaching and discussion.

RCH GENERAL INFORMATION

Junior Medical Staff Department

Director of Paediatric Physician Training Dr Margot Nash – margot.nash@rch.org.au Page / Ext – 4726 (Tue & Thursdays only)	**Director of Paediatric Physician Training** Dr Mike Starr - mike.starr@rch.org.au Page / Ext - 4771
Junior Medial Staff Coordinator Tracy Waller tracy.waller@rch.org.au Ext 5144	**HMO Coordinator** Dr Karen McLean **karen.mclean@rch.org.au**
Medical Workforce Advisor Elise Turner slise.turner@rch.org.au Ext 6365	Medical Workforce Advisor Shauna Rolt shauna.rolt@rch.org.au Ext 4230
Medical Education Officer Ms Jenny Gough -jenny.gough@rch.org.au Page / Ext - 6860	**International Medical Graduates Coordinator** Ms Lynne Hyett -lynne.hyett@rch.org.au Ext - 4632 (Mondays & Thursdays only)

This unit co-ordinates the appointment, support and education of junior doctors at RCH, working together with individual clinical departments and the Medical Education Officer and the Chief Resident Medical Officer and Deputies.

Junior doctors include Junior Residents (JRMOs), Senior Residents (SRMOs), Registrars and Fellows on site at RCH, and residents and registrars elsewhere who are in the Victorian paediatric training program.

The Medical Workforce Unit - Junior Medical Staff is directly responsible for the appointment of Paediatric Trainees (around 50 JRMOs, 22 SRMOs and 70 Registrars). The unit also has responsibility for the support and working conditions for all other junior doctors: around 155 departmentally-based Registrars and Residents, and 165 Fellows, Visiting Trainees and Observers

Administrative Procedures

Salary Payments
You will be paid according to the HMO Certified Agreement, and according to your experience. Salary payments are made fortnightly on Wednesday into your nominated bank account (or on a Thursday if there is a Monday Public Holiday).

Salary Packaging
Salary packaging is available to all staff paid by RCH. For information, contact the Smartsalary on 1300 554468.
See the website at http://www.smartsalary.com.au/

Medical Registration
All doctors working in our hospitals must be currently registered with the Medical Practitioners Board of Victoria. There are severe penalties for the doctor and the hospital if a doctor undertakes clinical work whilst unregistered. Doctors on general registration (Australian & NZ graduates or those who have passed the AMC Clinical exam) need to renew their registration each year in September. **It is now a strict requirement of the Board of Directors of RCH that all Registration Renewals are brought into the Junior Medical Staff Department, for sighting and noting on your file, as currently being registered.**

International medical graduates need specific registration with the hospital employing them and this registration needs to cover each site at which the doctor works. You should contact the Junior Medical Staff Department if your registration needs to be renewed or needs to be amended to include another hospital.

Medical Indemnity for Junior Doctors
The Royal Children's Hospital medical staff are provided medical indemnity by their employer, the Hospital. This indemnity provides medical malpractice cover for acts and omissions of medical staff in respect of public and private patients which occur during the course of their employment by the hospital.

The policy does not cover the costs of legal representation at Coroner's inquests, Medical Board hearings or other legal inquiries where you may need legal advice and or representation.

Therefore, it is STRONGLY recommended that medical staff take out appropriate cover for these costs with a medical defence organisation or indemnifier.

The Royal Children's Hospital supports staff through the medico legal office. Contact Dr Anita D'Aprano (Medicolegal Consultant) on ext 5452.

Car Parking

Due to a severe shortage of car park spaces, you will only be entitled to a space if you will be working at night, or you will be on-call (in this hospital), in this case, subject to availability, you may be allocated a car park card. If you are entitled to car parking, the JMS Dept will authorise this for you. A weekly fee is deducted directly from your fortnightly salary. When on rotation to another hospital, you need to write to the car park office and payroll to ensure that deductions are ceased (otherwise when you return you will have all the parking deducted in your first week back).

Bike Shed

If you require use of the bike shed, you will need to go to Engineering (located on the ground floor) to obtain a key. Make sure you are wearing your Identification badge when you go.

Critical Incident Debriefing

What is d-briefing?
Debriefing is the opportunity for staff to discuss critical incidents in the workplace with an expert, trained facilitator. At RCH, this is conducted by an external agency via the Employee Assistance Program. The De-briefing may take place with a group of staff involved in a critical incident, or on an individual basis. Clinical decision-making may be discussed at a debriefing session, but the focus of de-briefing is to provide support for staff.

Why do junior doctors need debriefing?
A recent survey of junior and senior medical staff showed overwhelming support for the need for de-briefing of ALL medical staff, junior and senior. Working in a paediatric hospital is a stressful business. Medical staff often feel inhibited about discussing how they are feeling, perhaps because it is not an easy thing to do, nor part of a medical culture. Junior medical staff need the support of their work-mates, consultants, fellows, and nurses – to be able to access and participate in de-briefing sessions.

What are the potential benefits of debriefing?
The goals of de-briefing are to allow ventilation of feelings, an understanding of what has happened, normalisation of reactions to trauma and assistance with practical strategies and support. Debriefing can assist individuals in being able to construct a whole story about the event, reducing gaps, reducing misunderstanding and unnecessarily carrying feelings of responsibility and blame. These outcomes can facilitate a team involved in a critical incident in working cohesively with a better understanding of their and other's reactions. De-briefing can also help ease the feelings of guilt many of us carry about critical incidents.

When might junior medical staff need debriefing support?
Support may be required after a variety of critical incidents, such as unexpected deterioration in a patient, patient death or patient arrest. Examples given by junior and senior medical staff in the recent survey included conflict with patient or family, and NETS trips.

What can you do to promote de-briefing?
- Whenever a critical incident has occurred, consider the need for de-briefing
- Encourage members of your team to attend de-briefing, and attend yourself!

Want to know more?
The trauma debriefing service offers a 24 hour 7 day per week response to critical incidents that occur within the workplace. Counsellors will be on-site within 2 hours of notification of the incident and take staff through a detailed process to maintain psychological health while dealing with the aftermath of a traumatic event. Contact EAP Direct on 1300 360 364, or Sara Nunan (CRMO, pager 442) or a member of the Chief Resident team.

Interpreter Services

Between the hours of:
8.30 am - 5.00 pm Monday - Friday
9.30 am - 6.00 pm Saturday
10.00 am -7.00 pm Sunday

All enquiries and requests for an interpreter should be directed to the interpreter service, extension 5026, 5998 or page.

Outside of the above mentioned hours all requests should go to the Switchboard. Switchboard staff will make arrangements if an interpreter is required on the phone. **If an interpreter is required to attend in person, they will contact the supervisor, who will be responsible for authorising the service and making the appropriate arrangements.**

All interpreters attending the hospital must wear an identification badge. In the cases where a badge is not being worn, they should be asked to produce it or to page Najat Maroki to identify them. This practice is very important to control the comings and goings of outsiders, in regards to confidentiality and security.

WORKING EFFECTIVELY WITH INTERPRETERS

1. Keep language as simple as possible and avoid using jargon which may confuse the interpreter and therefore the client.
2. Regard the interpreter as a co-worker.
3. Inform the interpreter about the case and the aims of the interview.
4. Accommodate interpreter and client in suitable physical situation. For example, seating within a triangle.
5. Always introduce interpreter to client.
6. Explain respective roles to client.
7. An interpreter should be consulted where appropriate regarding cultural factors. (Before or after the interview.)
8. Do not show haste and impatience. Adequate time should be allowed for the consultation, remembering that it will take twice as long as normally, when working with an interpreter.
9. Do not show discrimination against interpreter's or client's nationality.
10. Do not keep interpreter waiting without explanation.
11. Always speak directly to your client.
12. Keep sentences short. Ask one direct question at a time and wait until the answer is given before asking another.
13. Try to obtain small amounts of information at a time, so that control can be maintained.
14. Do not rely on unqualified interpreters, (e.g. other staff, friends or relatives) who are not covered by the interpreter's code of ethics.
15. The use of children as interpreters can result in role reversal within the family and can inhibit discussion.
16. Do not deny your client the natural communication of non-verbal gestures.
17. Explain any side conversations as soon as possible.
18. Call on the same interpreter as possible.
19. Do not interrupt conversations between client and interpreter.
20. Do not assume that the client has knowledge of the system.
21. Be aware that many people understand more English than they speak.
22. Obtain the help of an interpreter if the parents want one even if they speak some English.
23. Ask the interpreter at the end of the interview to find out if the patient/parent has any further questions.

Intranet

Intranet and clinical guidelines

1. The homepage for The Royal Children's Hospital website is http://www.rch.org.au/

2. A word about the Quicklinks; (see above for what to look for on the homepage). The Clinical Practice Guidelines are vital. They are constantly being updated.

3. You can look up RCH staff phone extensions and email addresses, and you can access the Patient Information database (CLARA) and Library services from the homepage using the icons on the top right of the homepage:

Night Cover

RCH Hospital - What happens on Nights?
Handover for the ward Night Team (not including the ED doctors) occurs at 2100 in the Resident's quarters. The medical Registrar and Resident, Specialties Registrar and Resident and the Surgical Resident for the day are present and handover to the night's Team.

The night's team consists of 2 residents and 2 registrars on for the wards and a paediatric registrar in emergency who you can bounce ideas off if you are unsure. All night there is an ICU registrar who is awake. If in doubt, ASK for HELP.

There is a limited hierarchy within the night team: the inpatient registrar is often the most experienced and is the first port of call for concerns or questions. The admitting registrar is generally a junior registrar, but in instances may be as experienced as the inpatient one. For surgical problems the surgical resident should liaise with the surgical registrar. If a surgical patient becomes acutely unwell then the surgical registrar should be notified - and the medical inpatient registrar as well if required.

Patient Death

Processes and Protocols at RCH

Clinical Practice Guidelines - Death of a Patient - Procedural Guidelines
http://www.rch.org.au/clinicalguide/cpg.cfm?doc_id=5305
Policy and Procedure Guideline - Death of a Patient Policy
http://www.rch.org.au/policy_rch/index.cfm?doc_id=8965

Internal Support Services:

Social Work Department – ext 6111
Social Work support is available 24 hours to families who are experiencing the death of their child. Contact after hours by paging the Oncall social worker (through AUM or Nursing Supervisor). The Social Work Department also provides a:

Family Bereavement Support Program – Jane Sullivan ext 6111
All families receive an invitation to this programme approx 6 weeks after the death of a child. The programme offers monthly parent groups and Newsletter, occasional new parent, sibling and grandparent groups, an annual memorial service held in conjunction with the chaplains as well as hospital and community consultation. The Newsletter includes an account of parent experiences as told in the support group and can be accessed on the intranet:
http://www.rch.org.au/socialwork/pubs/index.cfm?doc_id=1212

Chaplaincy – page through switch (24 hours)
The chaplains will provide direct spiritual and emotional support to families and be a resource for contacting religious leaders in the community.

Victorian Paediatric Palliative Care Program – ext 5374

Consultation and liaison service available to hospital staff and to families of children with life threatening Illness across Victoria. Website offers useful information on symptom management, terminal care, ethics, procedures at time of death, funerals and bereavement care.
http://www.rch.org.au/rch_palliative/index.cfm?doc_id=1650

Anatomical Pathology – 5751 or page through switch
The pathologist on duty (business hours) will check documentation and give a final release. They are available to answer questions when there is uncertainty about autopsies. The mortuary is located on the 7th floor of the main building. After hours release of bodies is coordinated by the nursing supervisor.

The post mortem family information booklet should be available on the wards or through RCH stores.

Bereavement Services Coordinator – Maree O'Toole – ext 6111
Coordination of bereavement care throughout the hospital including the development of best practice systems of care, resources and education programs.

Clinical Ethics Department – Dr Lyn Gillam –ext 6924
Any staff member is able to consult with the Clinical Ethicist, Dr Lyn Gillam on an individual basis and confidential basis or as part of a multidisciplinary team meeting.

Staff Support Services – Employee Assistance Program 1300 360 364.
The EAP counselling service is available for staff and immediate family members for one to one consultations regarding any work or personal issues that may be impacting on a staff member's emotional and/or psychological well-being. Some issues may include conflict, stress, anxiety, depression, relationships, harassment, tension, grief, addictions etc. The EAP offers short-term, solution-focused interventions and referral(s). It facilitates the understanding of the impact of emotional, psychological and behavioral issues on ones work.
External Support Services:

State Coroner's Court - phone (03) 9684 4444
For guidelines re reporting see Clinical Guidelines re death of a patient. Website available for more information re process and resources of the court including counselling services
http://www.coronerscourt.vic.gov.au/CA256D040009D1DF/HomePage?ReadForm&1=Home~&2=~&3=~State

Victorian Institute of Forensic Medicine – phone (03) 9684 4444
Forensic Pathology service – providing autopsies for the State Coroner and investigations relating to the reviewable deaths legislation. For guidelines re reviewable deaths see Clinical Guidelines and VIFM website.
http://www.vifm.org/

NALAG (National Association for Loss and Grief) - **Phone: (03) 96503000** Provides information and referral to grief services, self-help and support groups and maintains a database of available counsellors
Website: http://www.nalagvic.org.au/

Australian Centre for Grief and Bereavement - Phone: (03) 9265 2100
This centre provides a referral service and counselling service for those eight years and older, support groups and information about grief and bereavement.
Website: http://www.grief.org.au

Very Special Kids (VSK) - Phone: (03) 9804 6222
Hospice and respite care for children who have life threatening conditions including those with high support needs. Also offers counselling, support and referral services. This includes support groups for children and adolescents.

Website: http://www.vsk.org.au

SIDS and Kids - Phone: (03) 9822 9611 or 1800240400 (24 hour consult)
Offers counselling, support groups and excellent written resources for all those affected by the sudden and unexpected death of a child six years and under. (NB: Some rural areas take referrals for children up to 18 years.)
Website: SIDS and Kids Online (Australia)
Website: http://www.sidsandkids.org/vic/ (Victoria

Mercy Western Grief Outreach Services – Ph: (03) 9364 9838 Provides counselling, support groups and consultation and liaison with NESB services in the Western Region.
Website: http://www.mercy.com.au/html/default.asp

SANDS Vic - Sudden and Neonatal Death Support - Ph: (03) 9899 0218
Self Help organisation with telephone support and parent groups.
Website: http://www.sandsvic.org.au/index.html

The Compassionate Friends Victoria Inc – Ph: (03) 9888 4944
Self Help Organisation offering 24 hour telephone support, library and parent support groups.
Website:http://www.compassionatefriendsvictoria.org.au/
Maree O'Toole - Bereavement Services Coordinator, Social Work Department January 2006

Patient Safety

At RCH, we place great emphasis on continually improving the safety of our care for children and their families.

We all make mistakes – from the most experienced staff to the most junior. It is a human trait that we don't always function perfectly. You will make mistakes in your work as will all your colleagues around you.

We are striving to create an environment that picks up mistakes and errors before they have an impact on safety and care.

To this end, please question clinical assessments, choice of drugs, fluids or tests that you do not think sound right, no matter how experienced the person who gave the order.
Forget the hierarchy; forget age and seniority ……**IT IS EVERYONE'S RESPONSIBILITY TO ENSURE ERRORS DO NOT CAUSE HARM.**

RCH has a Patient Safety Committee, which is chaired by Peter McDougall. He and members of the Risk Management Team – Paediatricians Annie Moulden, Karen Dunn and Ed Oakley are very keen for you to contact them if you have any concerns about patient care and in particular, if you feel you cannot question other staff member's practice.

The Patient Safety Committee acts to review adverse events and develops recommendations that will remove or reduce the likelihood of the event occurring again. It is focused on systems and work practices to develop a safer environment, one where it is difficult to make mistakes.

There is a Clinical Quality and Safety Registrar who can be contacted on ext/pager 4918 or cqs.registrar@rch.org.au

IF YOU HAVE IDEAS OR SUGGESTIONS THAT YOU THINK WILL MAKE YOUR WORK ENVIRONMENT SAFER OR MORE EFFICIENT, LET OTHER STAFF KNOW – LET US KNOW.

Annie Moulden and Karen Dunn ext 6957

Resident Quarters

The Resident Medical Officers Association represents your interests to the various bodies whose policies affect the daily life of the Residents and Registrars. Through the RMO Association you have representation on the Junior Medical Staff Committee and in the Victorian and Federal AMA.

Benefits provided to RMO Association members include:

- Coffee, tea, toast, cereal, milk, juice, etc in the Residents' lounge
- Microwave. refrigerator, toaster and toasted-sandwich maker
- Lockers for personal belongings
- Private toilet and shower
- Television, video and lounge suite
- Computers, internet access, e-mail and printing
- Regular social functions such as drinks at the pub
- Subsidised balls and cocktail parties
- The yearly RMO revue

Members of the RMO Association contribute towards the cost of these services and the upkeep of the Residents' lounge. Without their contributions we would not be able to continue the service. It goes without saying that all Residents and Registrars working at RCH should join the Association and participate in its activities. Part-time salaried Registrars and Fellows can join at a reduced rate. Honorary Fellows are welcome to use the facilities of the Residents' lounge.

The subscription is good value at around a dollar per day. To join, simply fill in your details below, then detach and staple the slip to your timesheet.

Everyone is encouraged to participate in the running of the Association. There are fairly informal 'elections' held in February each year and nominations for any position are welcome.

Thank you for your support and welcome to the Royal Children's Hospital community!

RMO Association ✂……

RMO ASSOCIATION

I wish to become a member of the RMO Association. I authorise the pay office to deduct the following amount from my salary each fortnight, for membership fees effective __/__/____:

(Circle appropriate category)	Full time:	$14.70
	Part time / Job sharing:	$10.50

Signature _____
Name (print clearly) _____
Employee number (on your ID badge) _____

PLEASE COMPLETE AND STAPLE TO YOUR TIMESHEET

Short Stay Unit

What is the short stay unit?

The Short Stay Unit is a medical and surgical unit attached to the Emergency Department, for children who are likely to need only a short hospital admission. These patients are looked after by the Short stay Registrar and one of the General Medical Consultants.

Admission criteria include:
1. The anticipated inpatient stay is < 36 hours
2. The child has been assessed, managed and had treatment started in emergency department, with a clear plan for treatment and discharge.
3. The child has been commenced on a defined path of care in a timely fashion.
4. The child is accompanied by a parent, who can take the child home at any time, when medically fit.
5. The case has been discussed with the Registrar covering SSU.

You may be asked to cover short stay if you are on relief or on the on call roster. This unit is also covered by the General Medical Units over the Christmas/ Holiday periods.

Exclusion Criteria include:
1. Child requires < 4 hours of care in Emergency
2. Child/family with complex social needs
3. Child requiring elective surgery
4. Child does not fulfill disease criteria.
5. Child < 1 month of age (corrected)

There will obviously be times when you think patients are still appropriate for the SSU when they don't meet specific disease criteria, or they have a problem not listed under the specific criteria. If not sure whether SSU admission is appropriate, discuss with the SSU Consultant, Registrar or AUM.

There will also be times when a patient is initially too sick for the SSU, but during the time in Emergency their condition improves to a point that SSU is appropriate. In these circumstances, speak to the SSU again. Patients from specialty / surgical units can be admitted to SSU as long as:

- That unit is happy and there is a clear plan for review and discharge

Specimen Labeling

What are the specimen labeling policy/ what happens to incorrectly labeled bloods?

The pathology request cards require your contact details for the samples to be processed. This includes the managing consultant so the result can be forwarded to them as well for outpatient follow up.

Patient safety is a priority at RCH and as such incorrectly labeled samples, which are not signed won't be processed. This is to avoid inappropriate treatment or even inappropriate/incompatible transfusion of our patients.

When accessing results in CLARA you will be asked to acknowledge any results you check. Unacknowledged results will be sent / emailed to the requesting doctor to ensure follow up.

Staff Support

Practicing medicine in a tertiary paediatric hospital may be stressful. The nature of some of the work, coupled with the physical demands, can cause significant stress. You may also have personal or work-related issues you would like to address.

Mentor Program for Junior Doctors
At the start of the year, the Chief Resident team (CRMO team) sets up mentor groups that may include a Fellow, a Registrar or two, and a Resident. The aim of having groups is to facilitate mentoring meetings and to allow for mentoring to happen between different members of the group. Currently the surgical registrars and fellows are not included in these groups but please contact the CRMO team if you need advice, support or representation on an issue (e.g. work practice).

Employee Assistance Program (EAP)
An Employee Assistance Program (EAP) is a counselling service provided to all RCH staff and their immediate families which is free and completely confidential. The service is provided by a company called Davidson Trahaire Corpsych. The counsellor(s) are qualified and experienced professionals who have who have extensive training in counselling and workplace issues. The contact phone number for all services is **1300 360 364.**

EAP Service offers:
- Counselling service for staff and immediate family members (EAP counselling)
- Trauma debriefing service for critical incidents
- On-line web based self help resource (eapdirectTM)

Please see the following website for more details on Staff Support Services:

http://www.rch.org.au/hr/intranet/support/?doc_id=2155

Chaplaincy
Chaplains are available to talk to staff as well as families and patients. They aim to foster hope, meaning and justice in a healing community. They are here to listen, to give personal support and to meet spiritual and religious needs if required. Contact a Chaplain by calling in at the Chapel (1st floor, main building RCH) – all religions are respected – or page the Chaplain on call via Switchboard.

Weekends

What happens on the weekends?

Who is around on the weekend?

- Receiving Medical Team 0830-2130
- The medical team who received on the Friday evening will do a ward round of their patients on Saturday morning
- Short stay Registrar 0830-1730 (terms 1 and 4) and 0830-2130 (terms 2 and 3).
- Cardiac Services RMO 0800-1400 (cardiac services ward then hands over to the Special Med Team)
- Oncology RMO 0800-1400 (oncology ward round and handover to the Special Med Team)
- Special Medicine Team (Reg and RMO) 0830 –2130 who together look after all the specialty medicine units
- Surgical RMO and Surgical Registrar 0730-2130
- Emergency RMO's, ACEM's and Consultant
- ICU Registrars
- NICU Registrars
- Anaesthetics Registrars/ Pain Service

RMO's will leave detailed handover notes for the weekend teams in the trays in the resident's quarters on Friday afternoons. If you are particularly concerned about a patient or have sensitive information please verbally handover to both the Friday evening and weekend medical team.

Most of the on call consultants or fellows will do a ward round on the weekends and will touch base with the appropriate RMO to notify them of the round or update them on any important patient information. Feel free to contact the on-call consultant or fellow for any unit over the weekend if you have any queries or concerns about patients at any time- **THEY ARE ON CALL FOR A REASON and generally know their patients very well.**

PAEDIATRIC PRESCRIBING

Pain Management

0. **Oral Medications**
1. **Infusions**
2. **PCA**
3. **Epidural**
4. **Local Blocks**

Safe prescribing

- Make sure you use the child's current weight to calculate doses
- Drug dosing is available on the intranet in the Paediatric Pharmacopoeia http://www.rch.org.au/pharmacopoeia/index.html
- Be aware that most errors are with frequently prescribed drugs
    - e.g. Morphine, paracetamol, gentamicin, codeine, potassium, frusemide, antibiotics, vancomycin, insulin
- Be careful of 10 X errors
- Check for allergies and make sure they are documented
- Use generic name rather than brand name

Hints for safe prescribing

- If transferred from Theatre, Emergency or ICU – check what has been given and when
- At RCH we only keep 250mg/5ml strengths of antibiotic mixtures
    - If you write "amoxicillin 250mg" the HIC think it's a capsule:
    - *check if a child can swallow capsules.*
    - *endorse e.g. 250mg/5ml if a mixture is needed.*
- You need an authority to prescribe increased quantities and more repeats e.g. *PBS quantity for flucloxacillin is only 24 caps or 100ml of mixture, no repeats.*
- Authority – ring HIC, phone 1800 888 333. Write approval number on script.

Resources

- Ring Pharmacy on ext 5492
- Pharmacy Drug Information ext 5208
- Page the ward pharmacist (Mon to Fri 8.30am to 5.30pm)
- Page the on-call pharmacist
- Use the hospital website:
    - Pharmacy
    - Gen Med/Clinical/Drugs resources
    - Clinical Practice Guidelines
- PBS on line (via Pharmacy web page, then Drug Information or under the RCH home page)
- Clinical pharmacology, Dr Noel Cranswick or Dr Andrew Rechtman ext 4995

IV Fluids

Commonly Prescribed Drugs

1. **Antibiotics**
2. **Anti-inflammatories**
3. **Analgesics**
4. **Antispasmodics**
5. **Antiemetics**

- Paediatric Pharmacopoeia
  http://www.rch.org.au/pharmacopoeia/

SYLLABUS

Registrars: a good coverage of the topics listed below is available in the RCH Paediatric Ortho textbook

Emergency Management

- General paediatric trauma management
  - EMST principles applied to paediatrics
  - Spine care
  - Evaluation and triage of injuries.
- Fractures
  - Closed reduction of common fractures
  - Salter-Harris classification and implications of growth plate injuries
  - Supracondylar fracture of humerus
- Slipped capital femoral epiphysis
  - Assessment and treatment
- Septic arthritis / Osteomyelitis assessment and management.

Elective Management

- Normal growth and development
- Physiological variants,
- Normal and pathologic gait evaluation
- Foot deformities
  - Clubfoot
  - Cavo varus foot
  - Metatarsus adductus
- Lower extremity leg length discrepancy, deformity management
- Knee pain
- Developmental Dysplasia of Hip
- Perthes Disease
- Spine
  - Adolescent idiopathic scoliosis
  - Spondylolysis, Spondylolisthesis
  - Scheuermann's disease, roundback
  - Back pain
- Cerebral Palsy
  - Principles of spasticity management and surgical treatment
- Neuromuscular disease
  - Spina bifida
- Bone dysplasias
- Genetic, inherited disease
  - Understanding modes of inheritance
  - Distinguishing malformation, dysplasia, deformation
- Metabolic bone disease
  - Osteogenesis imperfecta
- Tumour recognition, evaluation and treatment, including but not exclusive to:
  - Osteosarcoma
  - Ewings
  - Soft tissue sarcoma
  - Osteoid osteoma
  - Osteochondroma
  - Simple bone cyst
  - Aggressive benign tumours eg aneurismal bone cyst

REGISTRARS & FELLOWS GUIDE

ACKNOWLEDGMENT

I, acknowledge that I have read the attached Orientation handbook complied by the Orthopaedic Department of The Royal Children's Hospital.

Signed:

_____

Date:

_____

Please sign and return to Cvetanka Bogoeska, Orthopaedic Department, The Royal Children's Hospital.

Thank you for your cooperation.

Kind regards

Leo Donnan
Chief of Surgery
Director of Orthopaedics