

DEPARTMENT OF SURGERY STEVE BIKO ACADEMIC HOSPITAL

MANUAL/HANDBOOK 2019 Edition

REGISTRARS/MEDICAL OFFICERS/ INTERNS

Although this manual is prepared specifically for SBAH, the guidelines on behaviour, surgical patient processing and basic protocols are universally applicable in the rest of our University of Pretoria Training Hospitals.

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Department of Surgery

He who combines the knowledge of physiology and surgery, in addition to the artistic side of his subject reaches the highest ideal in medicine

– Christian Albert Theodor Billroth

- *Our beautiful healing (surgical) craft is best acquired and nurtured through constant continuous critical yet humble intellectual and scientific development and honing of dexterity.*

-Taole Mokoena

Vision

- To be the best Academic Department of Surgery in the Region

Mission

- Practise best clinical surgery whatever the circumstances.
- To train Critically medical Thinking practitioners of the future

Objectives

- To create conducive learning environment
- To produce safe medical practitioners in Surgical Emergency
- To produce competent doctors in their chosen field
- To train critical thinkers and learners with ability to adopt and adapt new knowledge

MOTTO

Till our Best is the Best

Should strive to practise best evidence-based surgery at all times

Surgeons often have a heavy workload stretching over many hours. It is absolutely imperative that a surgeon's decisions and actions are of such a nature that he will be able, on all occasions, to give an account of his actions, both to himself, his colleagues and the patient. Be patient. Exercise restraint even in the face of provocation from colleagues, management or patients. Irrascible and erratic behaviour may harm your patient and certainly will harm working relationships with your colleagues. To take out your frustration on instruments or theatre personnel, blaming everybody else except yourself, is a sign of a personality deficit. A surgeon should always act under control; people are placing their lives in your hands.

- **A good doctor is always a good doctor, regardless of the circumstances or environment.** Circumstances should not influence your being a good doctor. They can only influence the extent of your ability; a lack of essentials makes you less effective but not a bad doctor. Always strive to be a good doctor whatever the circumstances. Improvise.

- **It is by training that the athlete becomes fit.**

This Department strives to work to the best of its ability. All of us should avail ourselves to every learning and training opportunity. Learn from your mistakes and those of others. There should always be an all out effort to render the best service to our clients, the patients.

- **Paper has better memory than the keenest brain.**
(Scripta menant verba volant)

Please have a little pocket note book ready to jot down those precious pearls that come your way so frequently and to note what needs done. Furthermore, all encounters with the patient must be accurately, if only briefly recorded. These notes might save our collective bacon when medico-legal threats arise.

- **You cannot be taught in absentia.**

Medicine is a practical profession. It is learnt by theoretical tuition, practical demonstrations and professional task execution. One cannot study Medicine by correspondence. You must present yourself to all learning opportunities. Diligent and critical attendance at patient care activities is the best teaching tool.

It is very easy to pick up during an examination which student has combined a textbook and practical knowledge and who those that just studied the textbook.

- **Lead by example.**

From consultants to interns we are in one way or another, leaders. Please do it with distinction.

- **Good leadership is the highest form of service**

The good leader will have a servant's heart and will lead people to self-actualisation. Good leadership is not for the ingratiation of the leader. He will not use the shoulders of his subordinates so that he can get all the honour and accolades.

- **Punctuality is the Courtesy of Kings.**

Arriving late and leaving early is a disease amongst some doctors and the cell phones have exacerbated this bad habit. The notion amongst people that whenever a doctor arrives late or leaves early, he/she is going to save a life, has further cultivated this habit. Please be punctual and show respect for your colleagues and time.

- **Effective Communication**

Communication with patients and colleagues is of utmost importance. . Give yourself time to communicate honestly, frankly but courteously with your colleagues and your patients. Be sympathetic and empathetic to your patients and their relatives but not condescending.

- **Hand over must be formal and done by the bed side**

The salient aspects must be recorded

When the going is rough the tough keep going

- **When the road changes from tar to dirt to corrugation and potholes, that is when rattles are picked up and the quality of the vehicle is tested.**

In spite of all the negativity around us, there is still enough to be extremely grateful for. We are still in a position to get and give world class training, we can all keep our heads up high wherever we go in the world and whenever overseas guests visit our Department, they are all very impressed with our training as the best and compliment us on the quality of surgeons that we produce, demonstrated by is their increasing demand overseas. Let's keep it up

The Department's rejuvenation and modernization programme to address weaknesses in systematic research and publication record through reorganization and streamlining the clinics and clinical processes, and introducing new offerings is bearing fruits

May I urge all the members of the Department not to fall into the trap of negative thinking and talking because this is a vicious downward spiral; one thing leads to the next and it is very difficult to get back into an upward spiral again. There is an impression that the standard of maintenance is dropping in our hospitals. May I urge the Department of Surgery to be part of the solution rather than to criticise aloof! When you see a piece of paper or other debris lying around, pick it up and put it in the bin. In the wards, the nurses are not there to clear up after doctors, please help by clearing up after you have done a rectal examination, put up an IV line and while you have your gloves on, just help with the cleaning up of the sigmoidoscopy for example

Your demeanor and deportment must befit the profession at all times.

Personal neatness is taken for granted. Everybody is part of the professional team.

We expect everybody to look like medical doctors and not like some professions where it is "cool" to look scruffy. They have their image to maintain we have ours.

May the coming year be one of many successes and fulfilment as you strive to extract the maximum and to make the best contribution you can.

GENERAL

All members of the Department of Surgery are expected to be representatives of the Department at all times. They should "buy into" the *Motto* of the Department: **till our best is the best** and be "signatories" to the code of conduct, performing their duties as expected of each individual.

CODE OF CONDUCT

- Our primary concern is to keep the patient's best interest at all times.
- Be sympathetic and empathetic to your patients and their brethren
- Show respect for the patient and their expectations through your demeanour, attitude and appearance (as outlined in the Dress Code)
- Being involved in an academic department, means that you should endeavour at all times to improve your knowledge of the subject of Surgery by self-study and attendance of, and contribution to academic meetings.
- Become involved in research, regardless how humble. Assist where you can in the many research projects always going on.

DRESS CODE

It is expected of everyone in the Department of Surgery to show respect for the patient in attitude, demeanour and dress at all times. Because what is considered to be fashionable *and* respectful dress differs from time to time and from person to person, generation to generation, it is necessary to have parameters wherein personal preferences can operate.

It is an insult to a patient when you are involved in asking personal questions or encroaching on

their innermost physical privacy during an examination to be unkempt, grubby, wearing skimpy clothing that may reveal the wearer's cleavage, too much thigh, even umbilicus or hairy chest.

PATIENT RESPONSIBILITY

In medico-legal terms in the Department of Surgery all our patient, are the responsibility of the qualified senior members of staff. Undergraduate students who are members of the integrated professional team that treat patients are afforded the opportunity to learn and hone clinical skills in the treatment of our patients. This is a privilege and not a right.

All our patients will be treated with utmost dignity, respect and professional commitment at all times by all including the under-graduate members of the team. In the event of any dereliction of duty or mishandling of patients by of a student, the student will forfeit the privilege to further clinical training in the Department of Surgery.

GENERAL DIRECTIVES

Cleanliness is next to godliness

- Clean/washed/No B.O. or you will be asked to return home to complete your ablutions
- Clean clothes
- White coat
- **NB** A safari jacket is not a white coat

A safari jacket is a primary dress, but you may wear something suitable underneath, if you so wish, **NOT** long sleeves under a short sleeved safari jacket, least of all a jersey. A safari jacket, being primary dress. **A SAFARI IS BUTTONED UP but** a white coat can be worn unbuttoned.

Hands always clean and groomed (disinfected as necessary)

Nails always short and clean (it is absolutely unacceptable to do an internal Examination on a patient with long nails)

Hair: Men no hair longer than to the collar, clean, non - greasy

: Ladies hair tied back, no hair in the face. "Fringes" above the eye-brows

- Natural hair is easier to keep clean and under control in theatre – artificial hair (plaits, extensions) is acceptable as long as it meets the above requirements
- Ladies – no exposed cleavage or midriff or shoulders.
- No mini dresses
- No hot pants
- No running shoes or related footwear
- Men – no sandals
- Men – shoes with socks
- Men – if you intend to wear a white coat, the dress underneath is **SHIRT AND TIE**
 - if it is hot and you want to be "open necked" – you may wear a safari jacket or a white short sleeved shirt with a collar

(SIC) JUNIOR INTERNS

The rotation in Surgery will consists of total 7 weeks through various hospitals within University of Pretoria training platform. You will be assigned to units by rotation, wherein you will function as a junior colleague. You will be responsible for your own patients

- Clerking
- History

- Examination
- Investigations
- Consultations
- Attendance of operations and procedures e.g.
 - ◆ Gastroscopy
 - ◆ X-Rays
 - ◆ Sonar
 - ◆ Angiography
 - ◆ theatre

Each firm has its own weekly routine, it is expected of you to slot in with all the activities e.g.

- Special clinics
- Out-patients
- Ward-rounds
- Theatre sessions
- Academic Programme
- Emergency calls

Your team must have your contact details at all times.

- **ON CALL DUTY:** SIC students will be on call until **22:00** on a week day and weekend i.e. Friday 18h00-08h00, Saturday 08h00-08h00 (next morning) and Sunday 8h00 – 22h00 according to their allocated firm's schedule. Students are excused the night_or the Sunday before end of block examination.
- Remember students are NOT units of labour, clinical care of patients continue even without them. Patients are merely teaching "tools" for students but must be handled with utmost respect and be afforded dignity

SIC WORKING FORMAT

➤ **Student Interns do ward rounds**

- Examine the patients
- Check special investigation results
- Check vital signs
- Write follow-up notes

➤ **The Registrar starts the Ward round**

- Patients are briefly presented to the registrar
- Vital signs, special investigations and follow up notes are displayed at the bottom of the bed
- The registrar examines the patient while the student Intern presents the above
- The Registrar stands on the right hand side of the patient
- Student Intern stands at the opposite side of the patient (left hand side), the rest of the team stands to the left of the patient and at the foot of the bed.

➤ **Registrar examination of the patient**

- Mucous membranes
- Chest
- Abdomen, tenderness and bowel sounds
- Limbs for D.V.T. and related findings
- Drains – effluent (abdominal drains; Porto-vac etc)

- Urinary – volume, colour consistency
- I.V.I. functionality, type of fluid
- Current medication, check the chart
- Check follow-up notes
- Everybody will have everybody's contact details (mobile), from the Head of the Firm mobile phone, to the most junior member, these details are on your person in your diary or mobile phone
- Academic ward rounds with the Head of the Firm always start after registrar's ward rounds.
- Academic ward rounds will have the same format as the early morning ward rounds, except that the consultants will stand on the right hand side of the bed, the registrar on the left hand side and the rest of the team on the left and at the foot of the bed.
- At the end of the day, before everybody goes home a final brief working ward round is done and the time will be determined by the registrar. All special investigations that were done on the day are noted and reacted upon, vitals and progress of the patient are checked and recorded before the team leaves the premises. If there are problems or concerns with any patients, a formal hand over to the team on call must be done.

➤ **Theatre list**

No patient is operated upon on an elective basis without being seen by and discussed with consultant.

In the case of an emergency, if the Registrar feels competent to do the operation, s/he can proceed. Major cases must be discussed with consultant on call before operation

➤ **Post Intake and Academic ward rounds**

Should start 09:00

Students attend all procedures on their patients, especially operations, where they are expected to assist

➤ **Outpatients**

- The under graduate students do Out Patients with their team including the Head of the Firm.
- Students do all the admin on **their** patients
- Take the history
- Examine the patient and present to the most senior member of the team, preferably a consultant.
- Document all the findings, and the future plan of action.
- The duplicate discharge form is given to the patient for record purposes.
- write legibly

Students are not to be abused by interns. They should not be used as general porters or messengers

MINIMUM REQUIREMENTS FOR CLERKSHIP IN SURGERY.

Initial outpatient consultation:

Taking a case history) specific physical examination, preparing a differential diagnose is and formulating a management strategy (requesting lab tests , imaging, information requests, and preparing a structured treatment plan). Present this to your senior for discussion, ratification or amendment as necessary.

Clinical patient admission (minimum requirement:

Taking patient history, complete physical examination, writing up the notes, including Differential Diagnosis (DD) and summary, then formulating a treatment strategy. This includes not only further explanation of the DD (what do you need to request to support or reject the various conditions in your DD or to determine the seriousness or extent of the conditions), but also taking a structured medication history and formulating a treatment plan, as necessary.

Note: Any co-morbidities and how they might impact patient management.

Writing a treatment strategy

This should include the required follow-up exams, recommendations, treatment

Presenting a patient during ward rounds

You present the patient during rounds (in a systematic but problem based fashion).

Ward rounds (daily)

You will go on rounds to your own patients with the ward doctors

Informative consultation

You will inform, under supervision, a patient about a procedure, further treatment, lab results etc.

During the clinical rotation you should strive to take a structured medication history once a week from a patient you have admitted during the outpatient consultations, *you* should strive to write a structured treatment plan once a week for a patient. If possible, *you* should perform 1x therapeutic/follow-up consultation under the direct supervision of a specialist or registrar including writing prescriptions and informing the patient.

During the clinical ward and the outpatient consultations you must write at least one prescription, and you must write a complete proposal for IV medication, including calculation of IV solution infusion rate.

Write request for follow-up exam

E.g. for radiology, pathology, consults always under guidance and supervision. You will accompany your 'own' patients to the operation theatre

Discharging a patient

You will write a list detailing who should be warned or informed, when and why; you will write a preliminary discharge summary and get other discharge documents ready, write all prescriptions, and prepare the discharge interview with the registrar or intern

Interdisciplinary clinical consultation

You will participate in an interdisciplinary clinical consultation involving full clinical assessment (preferably relating to one of your own patients).

Oral presentation at post intake tutorials

Oral presentation to fellow students is given once during the rotation on a patient and on relevant literature. The follow-up discussion focuses on the content and structure of the presentation, and especially on argument and/or evaluation of the presentation with regards to useful lessons, statistics, methodology regarding diagnosis and management of the case

Report of procedures attended, exams or function tests and theatre

The clerkship gives you the opportunity of attending various procedures and exams or function tests, including the operating theatre. You must write a report (max. 1A4 sheet) on four of the events you attended giving account of what was done and what lessons were learned

Professional conduct

You will also be assessed on your professional conduct. How you conduct yourself during clinical work towards your patients and other health professionals and workers. How you deal with patients and their relatives

Your role in the evaluation

You are individually responsible for scheduling your assessment and evaluation (the clinical evaluations, presentations, oral presentations etc.). You must consult with your supervisor in advance about what you will be evaluated on and when. Your reviewer will counter sign in your logbook, discuss this with you (giving you feedback) and return the booklet to you after signing it.

You must submit your logbook to the secretariat at least two days prior to your end of block exams.

CLINICAL PRESENTATION AT TUTORIALS/WARD ROUND/SOPD								
Student name:				Student number				
Reviewer name				Date				
Clinical condition								
		Below expected level		At expected level			Above Expected level	
Collecting Information	History taking	4	5	6	7	8	9	10
	Physical exam	4	5	6	7	8	9	10
	Further history/examination	4	5	6	7	8	9	10
Clinical reasoning	Able to identify problem, separate	4	5	6	7	8	9	10

	main from side issues							
	Differential diagnosis	4	5	6	7	8	9	10
	Prepare examination plan	4	5	6	7	8	9	10
	Discuss treatment plan, prognosis, complications	4	5	6	7	8	9	10
Information transfer Specialist knowledge Patient	Clinical Notes	4	5	6	7	8	9	10
	Oral presentation	4	5	6	7	8	9	10
	Understanding of patient and condition	4	5	6	7	8	9	10
	Information and recommendation to the patient	4	5	6	7	8	9	10
	Contact the patient Decency and respect	4	5	6	7	8	9	10
Organization and efficiency	Time management skills, brevity	4	5	6	7	8	9	10
Final assessment		4	5	6	7	8	9	10

Feed Back from Assessor/Reviewer

Strong points	
Room for improvement	
Further notes on scores/recommendation(s)	

Student's signature _____ **Reviewer's signature** _____

Note on clinical presentation assessment. It is the responsibility of the student to ensure that s/he get to present

History (medical expert and communicator)

Encourages the patient to disclose their medical history; asks proper, general and hypothesis-based questions: gives proper instructions in order to obtain the required information.

Physical examination (medical expert)

Performs a logical, efficient examination ; balances general and hypothesis-based exam methods; keeps the patient informed; is aware of discomfort for the patient.

Clinical reasoning (medical expert)

Good understanding of pathophysiology , proper and selective use of diagnostic procedures and lab tests, accompanied by adequate risk/benefit considerations.

Information transfer (communicator)

Assessment of written reports (charting skills)

Language skills, proper use of medical terminology, clear summary.

Specialist knowledge (academic)

Knowledge of patient and condition (assessment during discussion or based on answers to questions).

information and recommendations to the patient (health care practitioner/professional)

Explains indications for examination and treatment, seeks permission when necessary, consults on strategy, provides proper advice to the patient and their family.

Contact with the patient communicator and collaborator)

Builds a good doctor-patient rapport, listens well and reacts properly to emotional and non-verbal signals. Shows respect, involvement and empathy. Fosters trust; reacts properly to discomfort, to the need for privacy, candidness and patient modesty. Respects and maintains patients dignity

Organization and efficiency (organizer)

Organizes the consultation properly, is aware of time, exercises brevity.

Adapted from Vrije University

ASSESSMENT OF CLINICAL SKILLS	
Student name:	Student number
Reviewer name	Date
Catheterization/Rectal/PV/IVI line insertion/ Venepuncture for investigation	Specify skills under review

		Below expected level		At expected level			Above Expected level	
Skill	Puts on gloves correctly	4	5	6	7	8	9	10
	Executes procedure according to sets standard/protocol	4	5	6	7	8	9	10
Specialist knowledge	Is aware of the reason for the procedure	4	5	6	7	8	9	10
Patient	Information and recommendations to the patient	4	5	6	7	8	9	10
Organisation and Efficiency	Well prepared, tidies up afterward	4	5	6	7	8	9	10
Final assessment		4	5	6	7	8	9	10

Feed Back from Assessor/Reviewer

Strong points	
Room for improvement	
Further notes on scores/recommendation(s)	

Student's signature _____ Reviewer's signature _____

It is the responsibility of the student to arrange demonstration and/or assessment of execution of

NOTES ON COMPLETING THE CLINICAL SKILL ASSESSMENT FORM

Carries out procedure according to set standards / protocols.

Specialist knowledge

Understands the reason for the procedure, knows why the procedure is executed in a specific order and according to a specific standard / protocol.

Information and recommendations to the patient

Explains the reasons for the procedure and the way the procedure will be performed. Explains Step by step the procedure and whether painful or uncomfortable. Re assures the patient as necessary.

Contact with the patient

Builds a good doctor-patient rapport, listens well and reacts property to emotional and non-verbal signals. Shows respect, sympathy and empathy. Fosters trust; reacts properly to discomfort and pain ,and to the need for privacy and candidness.

Organization and Efficiency

Thorough preparation and organization for the procedure, sees to it that all required equipment is ready at hand, works methodically though not slowly, tidies up afterward.

Adapted from Vrije University

SUMMARY TABLE OF MINIMUM REQUIREMENT DURING SURGERY ROTATION

Professional Setting	Minimum requirement
Initial outpatient consultation	6
Admission of clinical patient	4
Write a strategy plan for two of your 'own' patient including follow-up exams recommendations, treatment, information request etc.	3
Present patient at ward, imaging, pathology or post intake tutorial	x3
Present patient during grand rounds	x1
Ward rounds	daily
Evening/night round	As opportunity presents but at least X1 during intake
Informative consultation e.g. about results, a planned examination, further treatment.	1x /rotation
Write requests for follow-up patient examinations	1x/week
Case reports operating theatre write up	2 from any focus area focus area (vascular, trauma, upper GI, hepatobiliary pancreatic, colorectal or general surgery.
Rectal Exams	1x/rotation
Catheterization	1x/rotation
Wound care and anaesthesia	1x/rotation
Per vaginal pelvic examination	1x/rotation
Venepuncture for blood test	3x/rotation
Putting up IVI line	2x/rotation
Nasogastric Tube Insertion	2x/rotation

Adapted from Vrije University

SIC EVALUATION & EXAM PROCESS

A Students will write a general MCQ Test halfway during their rotation. They will also under go "group" OSPPE exam

The purpose of this test is two fold

- i) To give students an idea of how they will be assessed for Block Test
- ii) For the Department to identify students who may need additional tutorial (enrichment programme)

B Students will sit for End of Block Test (EBT)

This will comprise:

MCQ type test

- i) Clinical Case
- ii) X-ray examination
- iii) Observed Simulated (Paper) Patient Examination (OSPPE)

The weighting of the EBT is as follows

a)	MCQ	=	45%
b)	Clinical Case	=	25%
c)	X-ray Exam	=	20%
d)	OSPPE	=	10%
	Total	=	<u>100%</u>

*Student must get 60% or more to be exempted from writing the exam (to promote)

*Student must also get 60% aggregate for clinical case plus x-ray exam + OSPPE

And pass two of the three with 60% or more in order to PROMOTE.

Students who do not promote will sit for exams.

The compilation for final pass mark is as follows:

- i) 50% of EBT + 50% examination
- ii) Pass mark = 50%
- iii) Student must pass aggregate of clinical case, X-ray exam and OSPPE with 50% or more, and must **pass at least two out of the three** to pass the rotation.

Student who wish to improve their EBT mark for distinction are free to write parts of the exam Their final mark will be the arithmetic average of their respective EBT and Exam marks

SIC Clinical Rotation in General Surgery

Clinical rotation in general surgery entails a weekly tour of different units in the different teaching hospitals clinical platform viz Steve Biko Academic-, Kalafong- and Tembisa Hospitals. The tour is designed to give students a varied and diverse clinical exposure that covers the "curriculum" The areas to be covered include but not limited to the following list as well as common emergencies and trauma plus burns. The actual rotation for each student will be provided separately and made available through Click Up as well as from the office

Finally Happy Learning and Good Luck

GUIDELINES FOR MARKING OF STUDENTS CASE REPORTS

The following are guidelines for marking of student case reports.

The aim should be able to correlate theoretical information and patient care.

The first part of the report must be on clinical presentation of the index patient.

Next will be the literature search with or followed by critique eg unusual presentation, different management options etc

Things to be considered:

1)	General presentation i.e. how neat	10%
2)	History taking	15%
3)	Physical examination	20%
4)	Differential	5%
5)	Investigations	10%
6)	-+Management	10%
7)	Daily care follow up	10%
8)	Literature search and critique	20%

The use of a prepared form should be discouraged

2. Introduction

Please familiarise yourself with the content of this handbook.

Registrars play an important part of undergraduate student instruction on practical, clinical care instruction on practical clinical care. Please read the students part of this manual

2.1 Guideline

The Department is primarily a referral centre for district and regional hospitals from Tshwane according to Gauteng Health Department and guideline. It also receives referral from most part of Mpumalanga Province and some part of Limpopo Province

The Department functions according to firms and specialised units set out below.

Four General Surgery firms: Monday, Tuesday, Wednesday and Thursday plus Trauma Unit

Upper GI Surgery - Monday firm

Transplant and HPB Surgery - Tuesday firm

Breast and Endocrine - Wednesday firm

Colorectal Surgery - Thursday firm

Head and Neck Surgery - Thursday firm and Prof Pretorius/Dr Kluge

Trauma Unit

A new Metabolic Surgery (Bariatric) unit is attached to Tuesday Firm

It is expected of all members of staff to be clean, neat and of professional department with white coats. Males are expected to wear neck ties if a collar is worn or else a white short sleeve top or white safari top. No jeans or sneakers are to be worn. Females must dress sensibly and have due regard to older people's sensitivities with fashion. No blouse or top that reveals cleavage or midriff. No short skirts or hot pants. No open toe foot wear.

2.2 Hierarchy of Responsibilities

The professor and chief surgeon is overall in charge. The senior consultants are in charge of and overall responsible for their respective firms/units. This responsibility is shared by delegation with other consultants.

Registrars are responsible for running the day to day affairs of the firm. They should make all the decisions about patients referred to SOPD or Casualty for opinion. When in doubt one must not hesitate to consult with his consultant. **In all cases the consultant on call must be made aware of all urgent/emergency cases.** Registrars must make certain that all documentation is in order. Medical officers will deputise registrars to the level of their experience and competence.

All patients admitted to the Department must be examined by the responsible registrar personally during or soon after admission.

Interns/housemen must make sure that all instructions to junior doctors, nurses and other health care workers are carried out. **At no stage must interns make decisions** on admission, denial of admission or discharge of any patient they should attend to while in this Department. They should refer all patients to medical officer, registrar or consultant for decisions.

Student Interns function in support of interns on house keeping, therefore they are not to make any therapeutic or administrative decisions on their own.

2.3 Theatre Bookings

It is the responsibility of the registrar concerned to make sure that the theatre booking list is submitted to theatre by 13h00 the day before. Always indicate your # hash or cellular number at which you may be contacted in case of queries or problems.

A list of theatre allocation is available in the Department and from sister Boshoff or her deputy at the 4th floor theatre complex, and may change from time to time.

There is a Tshwane District Hospital **minor operations** theatre list by rotation between different firms which must be booked in advance. Please consult theatre allocation list. This theatre is particularly suitable for teaching interns minor procedures.

Operating time table for firms/units of Department of Surgery.

Be realistic about time and do not overbook.

Be punctual and at least be 15 minutes earlier in theatre.

Be available with lifting of the patient onto the operating table.

Be available in helping to put the drips and foleys catheter.

Discuss the unusual/uncommon cases beforehand with theatre sister so that appropriate instruments can be prepared for the operation and be available.

Book intra-operative radiographic imaging procedure the day before with X-ray Department.

Book Frozen section day before operation with Anatomical Pathology

Book isotope sentinel lymph node identification with Nuclear Medicine well ahead of time. Link this up with frozen section as necessary

Anaesthetic consultation must be done 2 days before the operation for those problematic patients undergoing an operation.

Report problems to other personnel and to the consultant so that conflicting situations can be resolved.

Nobody should start a procedure if not thoroughly prepared beforehand for the operation.

2.4 Academic Programmes

The following are set Academic Programmes which all members of the Department except those actively involved in emergency patient care are expected to participate in:

Monday	15h30 :	Radiology meeting 5 th floor - Radiology Department
Monday	16h30 :	Morbidity and Mortality Meeting, Department of Surgery
Tuesday:	15h00 :	Surgical Anatomy Session - Anatomy Department
Tuesday	16h00 :	Research meeting
Wednesday	15h00 :	ICU/Theatre Prioritisation Meeting
	16h00 :	Pathology meeting - Institute of Pathology
		Wednesday afternoons indicated by the years roster
Thursday	16h00 :	Gastro-Enterology meeting at Department of Surgery, 3rd week multidisciplinary M&M(see 1.4.1)
Friday	13h00 :	Academic programme - Department of Surgery

2.5.1 3rd Thursday of each month at 16h00: Multidisciplinary Morbidity and Mortality Meeting

presented by different disciplines by rotation. Therefore no GE meeting.

3. **Regional Hospital, Clinics and Referrals**

3.1 Steve Biko Academic Hospital is a referral centre for certain hospitals and clinics. Please check the latest referral routes for Gauteng hospitals.

3.2 **Emergency transfers** are to be arranged telephonically with the registrar on call. Referrals can only be accepted from a hospital on Steve Biko Academic referral route.
In case of doubt, contact the consultant on call or the Head of the Department.
Whatever the case, **please err on the favour of patients** - accept the patient and deal with administrative issues afterwards.

4. **Duty matters**

4.1 **Working hours**

Departmental activities begin strictly at 07h15 Monday to Friday with an intake report.

Before the morning meetings, ICU and critically ill patients must be seen by registrar.

It is advisable that all doctors be on the hospital premises until 16h00 (if not on call or no post graduate meetings).

All must attend the meetings which are compulsory and function as a forum for official departmental communication as well as formal and informal tuition.

Weekends

Every firm is responsible for its own patients and they must be seen by the firms registrar or medical officer together with the intern.

4.2 **Calls** begin and end at 07h00 on week days and end at 08h00 on weekends.

Emergency surgical cases presenting between 06h00 - 08h00 weekends can be handed over to the incoming doctors on call by mutual arrangement. Afterhours on week days and weekends problem patients must be personally handed over to the registrar coming on call.

The Department **does not** subscribe to the practice of day off or early termination of duty on post call day as doctors are expected to complete working up of newly admitted patients over and above all else.

4.3 **Call list**

The call list is drawn by the Department on a monthly basis. Any problem with the list must be discussed with Head of the Department or the consultant delegated to draw up the list.

The Casualty, the switchboard and the Departmental secretary must be informed in case of any changes to the published list.

4.4 Sick leave

A leave form obtainable from the Departmental secretary must be completed, and a medical certificate submitted for absence of longer than 2 days.

4.5 Annual leave

Annual leave for registrar's and MO's is co-ordinated by the Department and for Interns by the base Department of Surgery.

Leave forms must be handed to the Department 1 month before the actual leave.

Interns leave is allocated in advance and this must be adhered to.

4.6 Special leave

Examinations and congresses are regarded as special leave and a notice must be handed over 1 month before or as early as possible. Supporting documentation must be supplied.

4.7 House doctor's rotation is organised by the Superintendent and Head of the Department.

4.8 Teaching of students

- MBCbB VI:
- Students rotate for 7 weeks in the Department and take part in all the firm's activities i.e. clinics, weekday rounds, weekend rounds and also calls. Students make a weekly tour of different units in the different hospitals to gain wide and varied exposure to the full spectrum of surgical case load mix
 - Even though they are responsible for some of the ward work, these must not interfere with formal or informal teaching.
 - They may assist interns with their work but this should not absolve the intern from their primary responsibilities.
 - **SIC's must not be abused**

4.9 Communication / Speed dial

- Every doctor must obtain a cell phone hash number and give this in at the Department office secretary.
- Cell phone and/or home telephone numbers must be handed in to the Departmental secretary and these will be published on the call list.

5. Administrative aspect of patients

5.1 Surgery wards:

Wards 6.5	:	Female Surgery + metabolic surgery high care ward
Ward 6.4	:	Male Surgery
Ward 6.3	:	Vascular Surgery
Ward 6.10	:	Transplantation
Ward 4.9	:	Surgery and Trauma ICU
		All burns patients should be sent to Kalafong in the 1 st instance
Acute Ward 4.0	:	Trauma and Acute Surgical admission
Ward 3	:	Paediatric Surgery
Ward 6.1 and 8.5	:	Plastic Surgery

5.2 Admissions

- Admission form must be filled in for each patient together with the prescription forms with clear instructions to the nursing staff, eg. N.P.O., Prepare for theatre, admit to ward x.
- The name of the patient, hospital number, age, and diagnosis must be filled in the intake /admissions form obtainable from out patients and emergency department and wards.
- The surgery clerking book must be filled in by the intern/doctor and/or students on call.
- TPH 1 forms are filled in by the admitting doctor (intern/registrar/consultant).
- For speedy admission on emergencies must be organised with the Casualty nursing staff.
- Any patient taken over from other disciplines must get a surgery clerking book.
- Patients admitted on behalf of the other firm must be handed over the next morning directly to registrar concerned.
- All patients must be admitted via SOPD or Casualty if not a clinic day, where they should be clerked fully before admission to ward.
- Elective admissions are admitted directly to ward provided they have an admission form completed by the respective unit.

5.2.1 When the wards are full, patients may be admitted to other disciplines wards. Such patient must be seen regularly and full ward round conducted. These patients must be returned to Surgery wards as soon as there is vacancy.

Patients referred to the surgery on call doctor will be treated as a consultation and if the condition is for surgical admission, then a surgical clerking book to be completed. If the casualty patient is not for surgical admission, then the patient is referred to appropriate discipline or back to casualty officers to manage further.

5.2.2 Other disciplines may admit their overflows patients to our wards but after consultation with our registrar on call. **No acutely ill patients or infectious patients should be accepted. These should be substituted by stable non-infectious patients from the respective discipline.**

5.3 Discharge

5.3.1 Discharges are to be done by the house doctors and registrars on the authority of the consultant.

5.3.2 Discharge letter:

NB!!! This is a very important document and is the responsibility of registrar to ascertain its accuracy even though the intern and/or medical officer may have helped.

During discharge, all the patient information is stored in the data bank/computer.

All the diagnoses, complications and the procedures done are coded according to the international coding system, ICD10

Coding to be done by registrars/MO in the department.

Write a short summary of the clinical picture and progress of treatment and disease, the diagnosis, complications and procedures are recorded. State clearly the future plan for the patient.

Limited use of words and abbreviation are important because there is limited space available on the database.

Treatment such as radio- or chemotherapy must also be indicated on the letter.
Print 3 copies of the discharge letter.

Discharge letters, must also be filled for patients who died and for patients who are transferred to other departments or hospitals

On completion of triplicated discharge letter/notes, give one letter to the patient to keep as his/her own records. This letter must be shown to her/his family doctor, referring doctor or hospital and patient must be informed about this.

The 2nd copy must be taken out of the bed letter and be put in the special box reserved for this purpose in the doctors' room in each surgical ward, to be collected by Department Secretariat.

The 3rd copy remains in the bed letter.

Any letter of referral from other hospitals must also be filled in and sent back to the referring hospital with an answer at the bottom.

5.3.4 Prescription (TTO)

TTO's to be filled in on the back of the ward prescription forms.

TTO's to reach the dispensary before 10h00 am.

TTO's for schedule 7 medications on motivation may need additional forms to be sent with prescriptions.

5.3.5 If a follow up appointment is needed, hand an appointment card to the patient yourself with the date of follow up clearly written and patient explained to.

The appointment must be made on the specific firm's clinic date.

5.3.6 Make sure that all radiology reports are in the patient's file.

5.3.7 Write a summary of diagnosis and plan in the bedletter of the patient for further handling of the patient and other outstanding results or investigation.

5.3.8 Please fill all the sick leave, pensions or disability forms for the patient before the patient leaves the hospital.

5.3.9 Make sure that the patient knows what her or his diagnosis is as well as the long term treatment plans. Take time to explain in as simple a language as possible in order for the patient to understand and remember.

5.4 **Re-admissions**

5.4.1 For patients discharged from the ward, but to be admitted on later date:

- complete discharge forms and print 3 copies.
- Give appointment for re-admission date and please state clearly the admission ward and firm's name or consultant.
- Hand the file and patient over to the sister in charge.
- All re-admission or elective admissions must be made directly to the ward.

5.4.2 The names of outpatients booked for theatre on a later date must be filled in the firm's booking

book.

The name, age, hospital no, diagnosis and type of operation planned for the patient must be written clearly in the booking book. Please include patient telephone or mobile contact in case of any changes with the booking. Obtain and record alternative contact number of a partner/friend or relative

5.5 Documentations and notes in bedletters

5.5.1 This can be done by the students or intern but remains the responsibility of the registrar.

Use a black ballpen in all the notes.

Daily progress; problems and plans of further management must be clearly noted in the file or bedletter with clear indication of the **most senior member** of staff who has made the decision or recommendation. Write the date and time of each interaction the bed letter.

5.5.2 Handover of patient must be done formally and next to the patient so that both the handing over Doctor and the receiving one are in agreement on the management plan especially on patients for emergency surgery or active resuscitation that must be documented.

5.5.3 **Transfer of emergency admissions to their specific special disease management firms must be done after the patient has been stabilised and NOT OVER the weekend. If the patient has had an operation during emergency admissions the firm that admitted and operated on the patient must recover the patient and only refer the patient to the special disease management firm for further treatment planning as necessary.**

5.5.4 Operation Notes

All operations must be filled in in the bedletter in the specified area.

Notes must be written as completely as possible by the doctor who performed the operation. (See example below)

Minimal Requirements and Guideline for Operation Notes/Record

Remember these are important medicolegal documents. You might meet them next in court several years hence: therefore they must be sufficiently detailed to remind you of the event as well as convince the presiding officer (a lawyer by training). They should reflect your thinking during the operation! The unexpected, the unusual and the difficulties.

Example 1

Title of the Operation: Full description

Example:

Oesophagogastrrectomy, antiperistaltic left colon transplant, Roux-en-Y colo-jenunostomy with feeding jejunostomy and incidental splenectomy.

Surgeons:

List All. They might save you in court several years later especially if the notes are not complete or convincing.

Date:

Be careful and be accurate especially at year change, month change and day change.

Anaesthetic and Anaesthetist (s):

Indicate nature of anaesthetic and anaesthetist(s) - (can be omitted if a separate anaesthetic record is reliably completed).

Indications:

Describe fully why operation was done e.g. acid ingestion, with oesophageal strictures and destroyed stomach.

Access:

Describe the exact incision(s) and if special position state it clearly.

Midline laparotomy, left cervical curvilinear incision.

Finding:

Record the findings in full, not only abnormal ones but also relevant normal e.g. stomach contracted into narrow tube with only fundus spared. Duodenum normal. Adhesions of stomach to liver, spleen and transverse colon. Spleen, liver and small bowel normal.

Procedure

Describe the essential steps of the procedure to indicate that careful thought and meticulous dissection was applied e.g.

- 1) Adhesion of stomach to liver, colon and spleen released.
- 2) Stomach mobilised fully. Tear of spleen during dissection - packed with spongosten and swabs. Bleeding continued → splenectomy effected.
- 3) Blood supply to previously prepared left colon evaluated by prior arterial clamp isolation. Left colon mobilized with blood supply based on left branch of middle colic artery. Previously measured length of left colon isolated and a transverse sigmoid colon anastomosis effected with single layer interrupted 3/0 PDS.
- 4) The cervical part of oesophagus mobilised and rigid vein stripper passed into stomach and retrieved through gastrotomy. Oesophagus stripped/avulsed from its bed with some difficulty. Stomach mobilisation completed with suture ligation of left gastric vessels. Duodenal stump closed in single layer continuous 3/0 PDS suture.
- 5) Left colon passed through bed of oesophagus with vessels protected in a sterile "laparoscope camera plastic cover". Colo-cervical oesophageal anastomosis effected with single layer interrupted 3/0 PDS.
- 6) 40cm antecolic Roux loop fashioned with staples and a 32FG circular stapler used for colo-Roux-en-Y jejunostomy.
- 7) Tunnelled feeding jejunostomy placed beyond the Roux loop.

Haemostasis:

Always comment on haemostasis so that should post-op bleeding occur it is known that you had made sure otherwise e.g. satisfactory, cautery and ligatures used or ligasure/other energy devise. If excessive intra-op bleeding, state volume and/or intra-op blood transfusion.

Drains:

- 1) Nasogastric tube into colon transplant secured with nasal halter
- 2) Portovac drain to neck
- 3) Argyle drain to mediastinum through left subcostal

Closure:

- 1) Lap in layers; 1DPS to sheath, clips to skin.
- 2) Neck, vicryl interrupted to muscle, clips to skin.

Dressings:

Dry

Specimen:

Always comment on specimens so that if they get lost, there is at least record of you sending them, e.g. Histology.

Post op Orders:

Always comment regardless who writes out the orders. Remember anaesthetist usually write analgesia only and perhaps fluids, but never observations orders including management of drains such as frequent drain emptying and record of output. Always order BP/Pulse/Resp for at least 8 hours even in otherwise straight forward cases, lest nurses neglect to check your patient. This may be of important medicolegal significance should patient collapse post-op because either nurse neglect to monitor and call you when condition “change” or post-op haemorrhage or anaphylaxis.
e.g. Fluids, Analgesia and ventilation a/c ICU staff.

Prognosis:

This is usually advisable in severe trauma or extensive malignancy case because when patient demises, relatives might blame you and not the disease.

Remember to visit your patient in the ward to confirm that your patient is safely returned and condition satisfactory, your orders are understood and being followed!

Example II:

Operation title: Emergency Appendicectomy

Surgeons

Dr Longnose, Dr Another, Medical Student Diligent

Date:

03/03/03

Anaesthetic:

See record

Indication:

?Perforated appendix

Access:

McBurney's Incision

Findings:

Retrocaecal appendix with faecolith.

Rt Ovary and tube N

Enlarged ileocaecal LN → Biopsied

Terminal ileum N

Procedure:

Appendicectomy effected

Stump buried with purse suture

Haemostatis:

Achieved with cauterly and ligatures

Drain:

Nil

Closure

2/0 Vicryl to muscle. 2/0 Nylon interrupted mattress to skin

Specimens:

X1 Lymph node for histology

Post OP Orders:

Ordered - see prescription sheet.

Diagnosis:

?Viral ileitis

Prognosis

Good

5.5.3 Afterhours

Complete notes must be written in the bedletters of any patient seen by another firm afterhours.

Do not prescribe any antibiotics without discussing it with registrar or the consultant. See "fever work up" under burn wounds protocol.

5.5.4 ICU or High Care patients must be seen twice daily i.e. am and pm.

Notes must be written on the ICU plan chart.

5.5.5 Weekly statistics which includes total admissions, operative activity, complications and deaths are prepared on Monday morning for the previous week and handed in to secretarial staff for compilation. This is presented at the morbidity and mortality meeting on Monday afternoon.

5.6 **Prescriptions**

5.6.1 Ward prescriptions are to be written on H430/GPS117 forms.

Dosages and intervals of treatment must be clearly written.

Outpatient prescriptions are written on TPH 172/81-516151 form (Orange)

Motivation forms must be filled in and signed by the consultant/registrar.

Students may prescribe for schedule I-IV medications but under supervision and signature of registrar, medical officer or intern doctor.

Revise the treatment daily as necessary and nursing orders eg. fluid therapy, wound care.

All new prescriptions are to be written and left in nursing ward file.

5.6.2 All doctors must have prescribed Doctor/Signature stamps or sign and clearly write Dr's name, degree and hash number which must be used with every prescription.

5.6.3 Treatment for ICU patients must be discussed with the doctor on call for ICU.

5.7 Injury on Duty (IOD)

All IOD patients must be seen by the registrar.

Complete notes must be written.

Non-emergency cases of IOD must be seen by the casualty officer.

IOD forms can be filled in by any registrar of the firm the patient was treated by.

5.8 Transfers and Transportations of patients

5.8.1 For a transfer to other hospital:

- i. Fill in a transfer form in triplicate
- ii. Fill in an official transport form
- iii. Fill in a consultation form.
- iv. Make sure that the patient is suitable for the chosen mode of transport eg. ambulance or shuttle Combi.

5.8.2 Emergency transfer to Kalafong Hospital

In emergency cases where transport is needed as soon as possible to Kalafong, the registrar must phone the municipal ambulance service to come and fetch the patient.

Paramedics shall then be available to accompany the patient.

All the documentation should be ready.

The transfer should first be arranged between the referring and receiving registrars.

5.8.3 Transfer back to the referring hospital must be done as follows:

- Fill in the lowest part of the referral letter of the referring hospital stating what management was done.
- Discharge the patient as point 4.3.
- Follow up appointment card given if patient is to come back.
- A discharge letter must be addressed to the referring doctor or the Superintendent of the hospital with full information. Our hospital number and follow up dates to be clearly written.
- A copy of the referring letter and the first copy of the discharge letter to be put in an envelope addressed to the referring doctor and hospital.
- Hand over the envelope to the patient or the ward sister.

5.9 Surgery Out Patients Department (SOPD)

The SOPD is run from Monday to Thursday from 08h00-16h00.

Upper GIT unit does Monday, Breast and Endocrine does Wednesday, and Friday for new breast cancer cases.

Hepatobiliary unit Metabolic Surgery and transplant do Tuesday and lower GIT unit does Thursday.

, Trauma follow up chronic Friday

The firm on call runs SOPD and casualty simultaneously.

Fridays have new breast SOPD and Trauma follow up clinic .

Uncomplicated wounds followed up at Wound Care OPD - 4th floor.

Stoma management followed up at Stoma Therapy Department - 4th floor.

Urgent cases are seen in Casualty otherwise patients should be booked for next SOPD day of that firm on call referring the patient to SOPD.

All walk-in patients are seen in the Emergency Department. Cold cases referred from another

hospitals are referred directly to the surgical OPD if accepted by registrar on call. Emergency cases should be seen at Emergency Department.

5.10 General guidelines about SOPD

- Try to start as early as possible to avoid piling up of patients. At least one doctor must start at 8h00.
- Surgery outpatients must be seen before 14h00.
- No new referrals to SOPD after 14h00.
- All doctors except those who are on call and busy must be in the academic meetings by 13h00 on Fridays.
- Cold surgery patients must be worked up as outpatient as much as possible depending on the condition of the patient and transport availability to and from the hospital.
- A lot of special investigations can be done as outpatient eg. sonar, X-rays, gastroscopy and blood investigations.
- Make sure that a patient is fit for operation well in advance of admission.
- Control diabetes mellitus and hypertension as outpatient.
- Small procedures are done in the SOPD such as:
 - Proctosigmoidoscopy
 - Biopsies: (FNA, Trucut) needle + excision
 - Aspiration cytology
 - Drainage of superficial abscesses under ethyl chloride.
 - Any minor operation that can be done on local anaesthetic

5.10.1 Appointment Book / Theatre Booking Book (See 4.3.2)

- It is used for prevention of overloading of the wards and theatre lists.
- Each firm has an appointment book which should be kept in SOPD at all times.
- The book must be handed over to the new registrar during change of rotation personally.
- The registrar then books patients in advance for **specific dates**.
- The name of patient, hospital number, diagnosis and planned procedure and patient contact details must be written on that specific date.
- Patients that **have had their operation either on their booked date or earlier must be cancelled out of the list**.
- Patients should have clear explanations about operations and instructions to come the day of operation for admission. Many elderly patients will need new blood results if previous ones are more than 3 months old.
- bookings should prioritise cancer and metabolically active endocrine cases

5.10.2 Minor or Day Case Theatre

Minor procedures can be done at SOPD minor theatre or booked for Tshwane District Hospital Theatre (to book with sister Sibaka -5739) for operation on a Thursday minor list. Cases must be booked on Tuesday for Thursday theatre list. This list must have summary of clinical backgrounds and the exact operation booked. This list is done by interns supervised by MO/registrar for Monday and Wednesday firms on alternate weeks.

5.10.3 Theatre allocation at Steve Biko Academic Hospital will be as follows:

Mondays	15 8	Lower GIT 08h00-16h00 Laparascopy only on week 2 and 4 (08h00-16h00)
Tuesdays	14 15 11	Endocrine, Wednesday Firm (08h00-16h00) Breast (8h00-16h00) Laparoscopic general surgery (Thursday/Tuesday alternatively)
Wednesdays	8 14 15	Head and Neck (08h00-16h00) Open half day list (week 1,3,5) Preferably Elective Trauma after morning Head and Neck Upper GIT (08h00-16h00)
Thursdays	14 15 11	Laparoscopic General Surgery Tuesday firm (08h00-16h00) Hepatopancreatobiliary (HPB) (08h00-16h00) Laparoscopic General Surgery (Monday/Wednesday alternatively)
Fridays	15 18	Vascular access (08h00-13h00) Hernia list (08h00-16h00)

5.11 Special investigations

5.11.1 Radiology

Fill in TPH62D form in triplicate.

State clearly clinical findings and reason for request of investigation.

State type of investigations required.

Angiography, CT scan, PTC, ERCP and gastro-intestinal contrast studies must be requested through this form and be monitored by the registrar and the doctor must personally speak to the radiologist.

5.11.2 Written consent for all radiological special investigations is necessary. Make sure that clotting profile is normal, IV line is up, urinary catheters in where relevant.

Make sure that patients are punctual for the investigations so that they don't miss the appointment. Bowel preparation should be done in all cases of GIT contrast studies and colonoscopy.

Bowel preparation to be prescribed and patient informed of diet and when to keep Nil Per Os for investigation.

Sonar examinations must be used only if necessary and not be misused or abused

5.11.3 Sick patients need the presence of medical students, nurse or house doctor during invasive or even some ordinary investigation to try and avoid complications.

This applies to all trauma or acutely ill patients from Emergency Department to the X-ray Department at all hours.

5.11.4 Remember an incomplete or a half hearted radiological investigation is useless (and can be misleading).

Therefore it is necessary to insist that the investigation be done in the correct manner/way, eg. CT scan with contrast medium IV and orally, double contrast Ba-enema in all those lesions that have already been seen on early films, IVP with cystogram and post micturition X-rays in traumatic haematuria.

Discuss all unusual, complicated or high risk patients with the radiologist on call.

Be personally available and involved as much as possible when the investigations are done. This often results in higher quality examinations.

5.11.5 Emergency X-rays in the ward with the mobile X-ray machine are usually of poor quality. In most cases you should organise personally with the radiologist or radiographer on call to do the X-ray in X-ray Department if the patient can be transported.

5.12 Blood Investigations

There should be no routine blood investigations. Always ask yourself how the result is going to influence the patient's management. Do not order a battery of tests but rather order a specific investigation. If you order any test, always take note of the results and act on them. This is not only good practice but to ignore to check the result of a test may lead to a charge of professional negligence should something untoward occur to the patient. The list of pre-operative tests as recommended by the Department of Anaesthesiology is available in the wards.

5.13 Cytology and Histology

5.13.1 Much of ablative surgery rests on tissue diagnosis. Therefore cytological and histological specimens must be collected properly and preserved correctly in order to obtain reliable results. It is the duty of the registrar to make certain that proper procedures are followed and that results are obtained (and posted onto the patient's file **even after death or discharge.**)

5.13.2 Frozen Sections should be booked with Department of Pathology at SBAH the day before and the timing of the operation discussed with the pathologist concerned.

6. Consultation to other Departments

Consultation to physiotherapy, social work and others need specific forms.

6.1 Consultation to Steve Biko Academic Hospital

6.1.1 The form is simple and should be filled in by the intern doctor or registrar.

All urgent consultations should be done telephonically with the registrar on call of the involved department and the consultation form left at the patient's bed side/file.

For the best result arrange with registrars to meet at the bedside of the patient.

In case of unsatisfactory or unsuccessful discussion with the registrar of the other department, inform your consultant immediately.

Weekends and afterhours registrars on call must personally or telephonically consult each other.

Patients consulted for must be seen before handing over to the next team.
Consultations are accepted 24hrs.

6.2 **Supporting services**

Consultations to physiotherapy, social work and others need specific forms.

Provide sufficient information and specify what type of service is needed eg. diet - what type, crutches and passive exercise.

6.3 **Consultation to Radiotherapy and Nuclear Medicine**

Consultation form to accompany patient on date of appointment.

7. **Consultation from other departments must be seen as soon as possible** but always on the same day of consultation by registrar on call. If registrar is tied up he/she must arrange and delegate a colleague to do so.

The consultant must be informed immediately if there is a slightest doubt about the consultation or patient.

Don't hesitate to telephonically consult with the referring doctor in case of any problems or queries with consultation.

8. **Special Clinics**

The following clinics are held in Steve Biko Academic Hospital, where patients must be followed up and or treatment be recommended.

8.1 **SURGICAL FIRMS SCHEDULES**

OPD, CLINICS AND INTAKE

THEATRE

DAYS	OPD CLINICS	THEATRE
MONDAY	Monday Firm + Upper GIT + Transplant + Combined Breast Cancer Clinic	Thursday Firm Colorectal/Vascular Surgery
TUESDAY	Tuesday Firm + HPB + Metabolic Surgery	Wednesday Firm; Breast Vascular Laparoscopic General Surgery
WEDNESDAY	Wednesday Firm + Breast + Endocrine	Upper GI Firm/Trauma/ MaxFacsUpper GIT) Head & Neck
THURSDAY	Thursday + Colorectal + Head & Neck	Maluleke Gen Surg (Hernia)/HPB Laparoscopic General Surgery
FRIDAY	On call team + Trauma + Special wound consultation (Problem wound only) New Breast/New Endocrine	Vascular/ Access Dialysis/Hernia

- 8.2 Head & Neck Clinic is at Radio Oncology Department at Tshwane District Hospital Thursday 14h00 lecture hall on the ground floor.
All head & neck cancer patients must be seen there.
Head & neck forms must be fully completed.
- 8.3 **Trauma Unit**
Follow up clinic at SOPD Friday only
- 8.4 Use of Pretoria-West Hospital for Hernia Centre of Excellence and Elective Laparoscopic Cholecystectomy
- 8.4.1 Pretoria West Hospital will be used as Hernia Repair Centre of Excellence from 2019 under the joint leadership of Dr Maluleke and Dr Maharaj.
- 8.4.2 Elective cases will be fully worked up at the source hospitals, viz SBAH or Kalafong Hospital.
Only ASA I patients will be booked for surgery at Pretoria West Hospital.
- 8.4.3 Patients will be admitted to Pretoria-West hospital the day before their scheduled operation.
- 8.4.4 Patients will be discharged one day after their operation. If there are complications such patients should be transferred back to their source hospital.
- 8.4.5 Registrars will be allocated to manage these patients by rotation under supervision of an assigned consultant also by rotation.
- 8.5 **USE OF PRETORIA WEST Hospital for Elective LAPAROSCOPIC CHOLECYSTECTOMY.**
- 8.5.1 Pretoria West Hospital will also be used for elective laparoscopic cholecystectomy from 2019 under the leadership of Dr Maluleke and Dr Maharaj.
- 8.5.2 Elective cases will be fully worked up at source hospitals viz SBAH and Kalafong Hospital.
Only ASA I patients will be booked for surgery at Pretoria West Hospital.
- 8.5.3 Patients will be admitted to Pretoria-West Hospital the day before their scheduled operation.
- 8.5.4 Patients will be discharged one day after their operation. If there are complications such patients should be transferred back to their source hospital.
- 8.5.5 Registrars will be allocated to manage these patients by rotation under supervision of an assigned consultant also by rotation
9. **Burns**
Should be referred fresh to Kalafong Hospital unless Kalafong is full
- Adult Admission policy to Burns is:**
- burns \geq 20% TBSA
 - burns across joints
 - burns of hand or feet
 - burn of face
 - burns to perineum
 - inhalation burns - these need prospective mechanical ventilation.
- 9.1 Burned patients seen in the Emergency Department are thoroughly washed in the ward shower after admission under appropriate analgaesia.
Contact the burn unit according to emergency list.
Admission forms for burned patients are pink.

9.2 Fever protocol for burned patients (also applies to any patient)

- take temperature yourself
- make full clinical examination: lungs, urine, catheters, MCS on wound swaps.
- take blood for FBC and blood cultures
- send urine and sputum for culture
- tepid sponging, pain medication eg. Panado
- no IV antibiotics without the consent of the consultant
- write full notes in the bed letter.

10. **Paediatric Surgery**

Children between 0 month to 12 years with surgical conditions are managed by the Paediatric Surgery team.

Children over 12yrs are managed by Adult Surgery Team

11 **Intensive Care Unit/High Care**

11.1 ICU

There are 6-10 beds in adult ICU serving all surgical disciplines under administrative responsibility of the Intensive Care Department. Only patients with multiple organ failure or those needing ventilation will be admitted after consultation with ICU doctor on duty/call.

11.2 **Emergency admission to ICU**

Seriously ill patients, with threatening or already presenting with organ failure can be admitted in ICU only after personal consultation with the ICU doctor on call.

Full details about the patient's clinical condition, complications or co-morbidity must be provided.

11.3 **Elective admission to ICU**

It is for major operations only, in which post operative ventilation is needed.

It must be booked at least 3 days before the operation and it must be confirmed a day before and the morning of the operation. Elective ICU cases are discussed and prioritised at a MDT meeting every Wednesday in Department of Surgery at 15h00

11.4 **Expected duty of the surgical service group with the patient in ICU:**

Registrar must see the patient in ICU at least twice - morning and afternoon and on weekends at least once.

The surgery doctor either registrar or MO remains answerable and responsible for all surgical procedures and conditions of the patient (i.e. managing the drains, further operation and removal of stitches or drains, etc.)

Good communication with the ICU staff is important.

You can suggest medication of the patient to the ICU doctor who remains accountable for the physiological well-being of the patient.

11.5 **High Care**

All ICU patients are ideally discharged via High Care for stabilisation before transfer back to general ward.

Other admissions to High Care will be unstable patients or patients on whom problems are anticipated either pre- or post-operatively. These should be discussed with both firm's consultant and doctor on call in ICU.

The overall responsibility of patients in ICU/High Care remain that of the primary doctors be they surgeons, physicians, orthopods, etc. The ICU doctor is responsible for managing the physiology of the patient in both ICU and High Care patients.

12. Medico-Legal Aspects

- 12.1 Every doctor is medico-legally responsible for any treatment or procedure carried out or omitted on any patient. While a clearly documented instruction from a senior colleague would be a mitigating factor, it does not absolve the doctor concerned from his/her individual liability. While the hospital may assist in some aspects of medico-legal litigation this cannot be relied upon. Therefore, the Department strongly recommends that all doctors must possess a **valid medical malpractice insurance** such as obtainable from Medical Protection Society through the agency of SA Medical Association. Well written contemporaneous notes are better than the best memory and the adjudicating officers, be they HPCSA Medical Board Disciplinary Committee members or Judicial officers, rely on written reports to make their judgement, where these are absent they will give the complainant the benefit of doubt. If you remember to write a note later, always make this fact clear and date it. Insertion of notes between others without making this clear is liable to be interpreted as post-hoc cover up especially when things go wrong.

11.2 Medico-Legal Documents

Sick leave, J88 (assault), disability, or insurance forms and death certificates are important medico-legal documents which must be filled in timeously and accurately to reflect the true clinical status as best known (and documented). Never alter or in any way conceal material facts as a favour to the patient, relatives or any third party including employers or employee representatives. Such an act is punishable by Medical Board of Health Professions Council SA (HPCSA). **Do not procrastinate or decline to fill in such forms when it is your responsibility.** If in doubt, consult your senior.

12.3 Police cases awaiting trials:

- 12.3.1 These patients are under police guard and are secured or tied to the bed. If this interferes with therapy or treatment the guards must be informed. Many of these patients do not have good sickbay facilities, so go to they must be discharged only if completely stable.
- 12.3.2 Patients who are already charged:
These patients can be discharged to the prison's clinic for further treatment, eg. dressing and medication like injections and tablets.
All patients must be discharged with discharge letter to the district surgeon or the nursing staff informing them of the progress in the hospital stay and advice of how to continue with treatment.

12.4 Forensic Post Mortem

- 12.4.1 Medico-legal post mortem examination:

It is done in all cases of unnatural deaths, i.e. all trauma deaths, burns patients, patients who died under anaesthesia by the Forensic Pathology Department.

No death certificate should be filled in these cases.

Only the back part of the death certificate should be filled.

The medical report should be filled in and all handed over to the ward sister.

Make sure that the file is discharged and that all the notes are complete before the file leaves the ward.

NB.: Be careful you may find or see this file again in court after several years, so write good notes!!!

NB.: Anaesthetic death are defined as death which take place or happened during anaesthesia or before the patient is fully recovered from anaesthesia or death which occurs within 12hrs after anaesthesia.

12.4.2 Non-forensic autopsy is done to ascertain the reason for death. This is done by Anatomical Pathology Department. A request form, family consent form and clinical history document must be completed. Remember that trainee Anatomical Pathologists need to practise, so avail them of such opportunities as often as possible.

SURGICAL PATIENT ACKNOWLEDGEMENT AND CONSENT TO PARTICIPATE IN TRAINING AND TEACHING OF MEDICAL STUDENTS

I (name of patient or guardian /relative), do hereby acknowledge that I am attending an academic teaching and training hospital where teams comprising of different levels training medical students and trainee specialist under the guidance of a consultant specialist surgeon will be treating me or (name of my charge/relative) from time to time .

I further acknowledge that my or my charge's/relative's patient material including

photographs may be used for teaching and training through any medium including print, video and other electronic formats, provided that all personal identification features are concealed or I have given express consent for their revealing.

It is acknowledged that I can withdraw the consent at any time without affecting my or my charge's further management in the hospital.

Through my signature I hereby give consent for that the aforesaid materials or photographs to be used for bona fide teaching, educational or training purposes .

Name: _____

Date: _____

Signature: _____

Witness: _____

Date: _____

Signature: _____

12.5 Consent for Procedures/Operations

12.5.1 Patient must be informed and explained to by the doctor(registrar, MO or consultant) about the procedure, or investigations/operation and treatment which will be undertaken and its possible side effects or complications. Written consent can be obtained by any doctor but remains the responsibility of the surgeon(s).

It is recommended that both sister and doctor are present when the procedure or operation is being explained and the consent is signed. Give the patients on information leaflet on the procedure/operation. **(Free patient information leaflets are available on the internet including association of Surgeon of South Africa (ASSA) website)**

12.5.2 All our hospital are a training platform for University of Pretoria. Therefore patients must be made aware and requested to consent for being managed by or with trainee doctors of different training levels.

12.5.3 Patients must acknowledge and consent that material, investigation results and photograph or video of their pathology may be used for teaching and other academic purposes.

13. **Disaster Management**

13.1 Disaster can only be declared by the Medical Superintendent on call. If you suspect that a disaster is about to occur or notice one evolving contact the superintendent on call.

13.2.1 When a disaster is declared the most senior registrar/Medical Officer informs the consultant surgeon on call and he goes to the Casualty to assist with triage of patients.

13.2.2 The consultant surgeon joins the registrar/Medical officer at the Casualty, assesses the situation and informs the Head of Department.

13.2.3 The Head of Department in consultation with surgeon on call decides on whether and which extra surgical staff is needed and directs that this be made available.

13.2.4 A full scale disaster will be managed according to accepted plan and principles including vacating certain wards, prioritising patients for operative care and calling for additional resources under the leadership of the Head of Department or in his absence, surgeon on call.

14. **Security**

14.1 Security on the Hospital premises is not assured. There have been cases of theft of staff belongings such as attaché cases, handbags, purses, departmental equipment especially computer related, car radios and cars. There have been instances of assault on staff.

14.2 Therefore be careful with personal belongings, lock them away when not in your personal possession. When on intake make certain that your car is in a secure place.

14.3 Avoid walking alone in the dark. This is particularly pertinent for women. If you see someone behaving suspiciously or strangely while alone, do not confront him, rather alert security. Female doctors/student interns are well advised to get security to escort them at night within the hospital if they are on their own.

15. **Injury on Duty/HIV Exposure**

15.1 Injury on duty, however this should happen, is to be reported to medical superintendent and requisite forms completed.

15.2 Any needle “stick” or contamination of staff mucus membrane by patient body fluids must be taken seriously and active steps taken to ascertain HIV/hepatitis virus infection status of the patient.

15.3 The procedure is to obtain blood from the patient and the member of staff concerned for emergency HIV or hepatitis viral status determination. This is done by reporting to the casualty officer on duty who opens an IOD file. If the patient is HIV positive and the member of staff is negative an HIV prophylaxis is started within 2 hours of the incident. Emergency treatment is obtainable from Casualty.

15.4 A written report of all IOD incidents should also be lodged with Head of Department of Surgery. This may be the only reliable record in a few years time when late complications of HIV or Hepatitis virus infection manifest and proof of the original incident is needed!

15.5 Staff members include medical students in this case who have a special protocol to follow.

16. The Surgical Team

Finally, the Department functions on a team basis, comprising doctors, nurses, pharmacists, physiotherapists, dieticians, other health professionals, clerk, porters and general assistants. Be prepared to learn from others while you teach and assist those less experienced than yourself.

Be honest with yourself, your colleagues and above all your patients. When in doubt, ask and all will be revealed to you!

17. Policies and Protocols for Common Diseases and Procedures

17.1 Patient Presenting with gastrointestinal bleeding

Bleeding is a significant symptoms and sign. Patients are usually frightened by it. So should be the doctor-it must be taken seriously however minor it might seem.

All patients who report abnormal bleeding must be investigated fully.

The first screening is a thorough history of coagulation disorders including bleeding tendencies, medication and herbal medicine intake.

Minimum investigations should include FBC, LFT with INR and urea & electrolytes.

If bleeding is significant or continuing, full resuscitation must be carried out even before accurate diagnosis has been established. However diagnostic investigation should continue alongside resuscitation if at all possible.

All **Upper GI** haemorrhage patients should undergo upper GI endoscopy within 24hrs unless bleeding actively with sustained shock, then **emergency Upper GI is mandatory**.

Most lower GI haemorrhage are not life threatening and would stop spontaneously. Significant and witnessed lower GI bleeding should have urgent lower GI endoscopy including rigid proctosigmoidoscopy and if bleeding emanates higher then urgent colonoscopy.

Insignificant lower GI bleeding must be further investigated with either lower GI endoscopy or radiocontrast enema.

Preparation for elective (urgent or otherwise) colonoscopy needs thorough preparation (see colonoscopy preparation protocol)

Life threatening lower GI haemorrhage may require emergency mesenteric angiography and embolization, as rule of thumb bleeding has to be 1-2 ml/minute for successful angiograph or on-table colonoscopy and colectomy.

For otherwise undetectable cause of significant lower GI bleeding urgent radionuclide scan might be useful-the rule of thumb here is 1-2ml/ hour for successful imaging

17.2. Preparation for Barium Enema**Day One:** (Day prior to examination)

- (a) No breakfast
- (b) **Only liquids such as :**
 - i. Clear soup
 - ii. Bovril
 - iii. Marmite
 - iv. Tea or Coffee (black only -No Milk")
 - v. Jelly
 - vi. Grape Juice
 - vii. Apple juice
- (c) **Avoid :**
 - i. Fat
 - ii. Oil
 - iii. Vegetables
 - iv. Fruit
 - v. Eggs
 - vi. Milk
- (d) Patient must walk around as much as possible if possible
- (e) Drink one glass of water hourly from 13:00-19:00
- (f) 20:00 - Drink 250ml Coloprep

17.2.1 Day of Examination:

- (a) 05h00 Fleet enema per rectum
- (b) 06:00- Drink 1½ glasses of water (Black tea or coffee with sugar if preferred)

17.2.2 Colonoscopy Preparation

- All patients must be admitted one day before procedure
- Doctor should send all OPD cases to Gastroscopy Suite to book date themselves and have procedure properly explained

NB: GOOD PREPARATION IS MANDATORY FOR A SUCCESSFUL EXAMINATION

PLEASE GIVE SPECIAL CONSIDERATION TO THE FOLLOWING

1. You must sign a consent form for colonoscopy and removal of polyps
2. Bring X-Rays "(Ba -enema) with to the Gastroscopy suite if available
3. Preparation must be followed carefully as prescribed. Please make sure that all the Golvately (Kleen - Prep) mixture is taken
4. Patient must be accompanied by a family member or friend because sedative are administered and patients will not be allowed to drive a car after the examination.

TWO DAYS BEFORE EXAMINATION

- (1) Clear liquids e.g. water, lemonade, black tea, liquid-fruit (only apple and white grape juice)
- (2) No milk, Bovril, jelly, precision diet, strained soup or fruit juice
- (3) Lot of water plus or minus 3 litres per day
- (4) No iron tables
- (5) No solids food

CATHARTIC: One bottle X-prep at 18:00

DAY BEFORE EXAMINATION:

- (1) Clear liquids as previous day
- (2) No milk, Bovril, precision diet, strained soup or juices
- (3) No iron tables
- (4) No solid foods
- (5) **GOLYTELY (KLEEN-PREP) MIXTURE (AS PRESCRIBED)**
Mix with four litre of water. Flavour with lemon or Oros as preferred.
Starting at 16h00 drink one litre of this mixture every hour **UNTIL ALL IS FINISHED!**
- (6) Nothing by mouth as from 22h00 except Golytely (Kleen-Prep) if not finished.

DAY OF EXAMINATION:

- (1) Nothing by mouth
- (2) 1x Fleet enema at 06h00

All patients must have working IV line on the day of examination.

Hb must be 10 or above

17.3 Patient Presenting with GI Obstruction

All patients with obstruction of the GI tract tubes need urgent if not emergency treatment. Therefore, unless there are compelling reasons they must be investigated as inpatients. Such patients include oesophageal stricture e.g. Ca Oesophagus, gastric outlet obstruction, suspected small or large bowel obstruction.

All but most mild cases need fluid resuscitation.

It is important to establish a feeding strategy early and implement it.

In hospital starvation is common and results in significant morbidity.

Incomplete small bowel obstruction can be observed if there are no peritonitic signs. Colon obstruction is dangerous and requires urgent decompression either surgically or colonoscopically.

17.4 HIV Testing Policy

An aggressive HIV testing policy is followed

All patients with sepsis

All patients with cancer (any cancer)

All patients with TB, invasive fungal or viral infection

All patients with DVT

All patients with peripheral vascular disease

17.5 Diabetes/Blood Sugar Testing Policy

Most Type II diabetics first present with complications therefore the following must be tested:-

All patients with sepsis

All patients with peripheral vascular disease

All comatose/ confused patients even following apparent trauma

Known diabetic patients

17.6 CRP Testing Policy

CRP is an expensive test and should be used discriminately.

Patient with obvious sepsis/inflammation that can be attributed to obvious cause need not be tested for CRP levels.

CRP should be used to monitor anticipated post-op complications or response to anti-inflammatory or antibiotic treatment

17.7 Management of Crush Injury

Most crush injuries seen in Hospital are as a result of blunt object assaults. Sometimes crush injuries may result from traffic accidents or falling building masonry.

Main clinical danger of crush injury is rhabdomyolysis and ensuing renal failure or cardiac dysrhythmias.

It is important therefore to test for myoglobinaemia and myoglobinuria. Serum Creatine Kinase/Creatinine Phosphokinase (CK), and serum potassium.

A “myoglobinaemia” or crush injury regimen should be instituted until CK or myoglobin levels normalise. Patient will need good (large bore) Venous line, CVP and urinary catheter for monitoring.

The central plan of the regimen is forced saline diuresis with 2-3ml/ kg TBW/ hr normal saline. This may be supplemented by Na 50m Eq per liter of saline and /or mannitol 2-3g/kg/hr for maximum 250g.

Care must be taken not to put patient into pulmonary oedema especial in presence of relative oliguria.

17.7.1 Management of Reperfusion Injury

Reperfusion injury refers to systemic circulatory collapse following re-establishment of arterial blood supply after a prolonged episode of acute arterial blood flow occlusion.

The principal scenarios are traumatic acute ischaemia of the limbs, compartment syndrome, and mesenteric vascular occlusion from volvulus or strangulated hernia.

The primary management of reperfusion injury is to anticipate and avoid it.

Liberal fasciotomy policy should be practised after re-establishing arterial blood flow to the limb.

Patient must be preloaded with IV fluids as in myoglobinaemia crush injury regimen and have good urine output before reperfusion is established.

In strangulated bowel cases including volvulus, necrotic bowel should be resected without detorsion to prevent reperfusion injury.

17.8 Management of the Diabetic Surgical Patient

Emergency Management of Surgical Patients with diabetic Keto-Acidosis and sepsis needs surgery. Diabetic control is nearly impossible during active sepsis; likewise sepsis control is not possible without diabetes control. Therefore both endpoints must be aggressively pursued.

Emergency Diabetes Control should be sought:

- Add 20 Units insulin to mixture to 200ml normal saline. It is recommended that you use 20ml albumin to seal the plastic Vaculitor to avoid insulin being adsorbed to the plastic container. This is not necessary if glass bottles are used

for infusion.

- Run in IV at 20 micro drops/minute (paediatric drip set)
- Check blood sugar every 20 minutes.
- When glucose is 11 or less stop the insulin infusion and give 5% Dextrose/ Saline and put patient on blood sugar sliding scale to maintain glycaemia ≤ 11

Management of Elective Diabetic Surgical Case.

Attempt to get diabetic control before surgery either by oral hypoglycaemics or insulin. Target RBS ≤ 11 (check).

On the eve of the elective operation keep NPO and put patient on 5% Dextrose/ Saline and blood glucose sliding insulin scale with target of ≤ 11 . Omit morning dose of hypoglycaemic agent. Diabetic should be scheduled higher up on the elective operation slate.

Post-operatively continue with 5% D/S and sliding scale until taking full oral feeds then revert to pre-op diabetic regimen with sliding scale insulin cover

NB Regular glucose levels testing is mandatory post-op since hypoglycaemic coma can set in insidiously in patients still recovering from anaesthetics.

17.9 Management of Gastric Outlet Obstruction (GOO)

Most adult patients presenting with GOO have peptic ulcer disease.

Management goals of GOO are

- 1) Resuscitation and correction of electrolyte and metabolic derangement
 - 2) Diagnosis of underlying cause
 - 3) Treatment of the cause
- 1) Patients with GOO present with vomiting which results in electrolyte and metabolic derangement viz dehydration, hypokalaemic, hyponatraemia, hypochloraemia, uraemia and alkalosis.
These need urgent correction – Normal Saline alone should suffice in most patients. If hypokalaemia is significant or is associated with ECG changes of depressed or inverted ST segment or prolonged QRS complex (check) careful KCl infusion via a **peripheral IV** route will be necessary.

Commence NGT suction to stop vomiting and aspiration.

Once resuscitated a source of Calories should be added including TPN when indicated.
 - 2) Early diagnosis of the cause must be pursued with urgent upper GI endoscopy. Patient must therefore have gastric lavage to clear out all food debris from the stomach.
 - 3) If peptic ulcer is diagnosed a dose of H₂-receptor blocker intravenously is prescribed e.g. Cimetidine 300mg 8 hourly (adjust for renal function) or IV PPI eg Pantoloc 40mg IV daily. Most ulcers even chronic ones have an acute inflammatory component which should settle with acid suppression.

After 10-14 days a repeat gastroscopy is done to assess progress. If still obstructed balloon dilatation or surgical pyloroplasty should be considered. Obstructing neoplastic disease should be treated on its merits.

16.10 Intercostal Drain Management for Trauma

Management of ICD for acute trauma is simple and straight forward and is as follows.

- 1) Always have the current Chest X-Ray both PA and Lat projections when inserting an ICD.
- 2) Whatever the indication the optimum place is the same at 4/5 intercostal space at anterior axillary line as described in protocol, unless the fluid (air or blood) is loculated which case the locule should be intubated directly. ICD should drain the intended fluid freely if correctly placed. If not review the CXR and indications for insertion and make sure it is in correct side and place! **No check CXR is necessary after ICD insertion.**
- 3) In order to expedite lung expansion and quick drainage of fluid via ICD, aggressive chest physiotherapy must be prescribed. If the patient is fully mobile he should go up and down flight of stairs a few times or otherwise must walk to and fro to encourage full lung expansion. Make sure patient is receiving adequate analgesia.
- 4) If the ICD continues to bubble for an extended period a bronchopleural "fistula" must be suspected and excluded. Another possible cause could be direct lung parenchyma intubation. In such a case ICD should be removed and a repeat CXR taken. If pneumothorax is still present a fresh ICD should be inserted preferably through different site (fresh incision).
- 5) ICD should be kept as long as the fluid to be removed still drains. When it stops draining (i.e. bubbling or draining blood) it should be removed and a check CXR taken to ascertain satisfactory result before discharge
- 6) Bronchopleural "fistula" is managed by low pressure high volume pump attached to two underwater seal ICD system in series.
- 7) Get the patient back for review within 7 days to clinically confirm maintained lung expansion and to exclude sepsis/emphysema.

NB Only 2 chest CXR are usually necessary in uncomplicated chest trauma, one diagnostic pre-ICD insertion and 2nd post-ICD removal to check complete resolution.

17.11 Management of Bleeding Oesophageal Varices

Bleeding varices are a life-threatening event up to 1/3 of patients die during a given admission. The objective is to resuscitate, stop active bleeding, diagnose, and prophylaxis against further bleeding.

1. Resuscitation

- Fluid resuscitation, preferably with blood component products
- Use somatostatin analogue treatment e.g. octreotide 100 mcg 8hrly subcut only if diagnosis is known
- If bleeding continues use Sengstaken-Blakemore tube

2. Emergency diagnosis
 - Early diagnosis is mandatory Emergency upper GI endoscopy if bleeding continues otherwise within 24 hrs. Banding or sclerotherapy should be performed.
3. Stem Active Bleeding before endoscopy if necessary
 - Early stem of active bleeding is essential
 - If torrential bleeding with shock use Sengstake-Blakemore tube until stabilised.
 - If all else fails to stem the bleeding consider an oesophageal transection procedure. This automatically eradicates varices
 - Once patient is stabilised start varix extirpation programme with either band ligation or sclerotherapy
4. Prophylaxis against further bleeding:

If the varices are small use long-term B-blocker otherwise complete varix extirpation programme

 - Regular elective re-endoscopy and further variceal extirpation if still present
 - Consider elective “partial” portosystemic shunt in selected case with good Child- Pugh score and presinusoidal portal block e.g. schistosomal periportal fibrosis or portal thrombosis

17.12 Wound Management

Proper wound management is important to surgeons since their craft and management tools involve wounding.

The primary principle in wound management involves **MOIST WOUND HEALING CARE** i.e. the wound must be cared moist. The ideal wound dressing should have the following characteristics:

1. Keep wound moist
2. Allow perspiration
3. Keep microbes out of the wound
4. Absorb excess wound exudate
5. Keep wound normothermic
6. Must not cause trauma on removal
7. Protect against further trauma

Best healing wound is a surgically incised wound or is a surgically clean at least
In practice wounds differ and can fall into the following categories:

17.12.1 CLASSIFICATION OF WOUNDS

Incised
Laceration
Abrasion
Partial or Full Thickness
Acute or Chronic
Clean, Contaminated or Septic

17.12.2 LOCAL FACTORS THAT AFFECT WOUND HEALING

- Ischaemia
 - reduced arterial perfusion
 - venous stasis
 - smoking
 - radiation

- oedema (\uparrow compartment P°)
- constant compression pressure
- Infection
 - bacterial
 - fungal
 - parasitic
- Foreign Body
- Topical Steroids

17.12.3 **SYSTEMIC FACTORS THAT AFFECT WOUND HEALING**

General Malnutrition

Specific

- Micro Nutrient Deficiencies
- Vit A & C
- Minerals, eg Cu, Se

Immunosuppression

Diabetes Mellitus

Collagen Disorders

- Marfans syndrome
- Collagen vascular disorders

Systemic Infection

17.12.4 **ASSESSMENT OF THE WOUND**

- Assess general condition of patient
- Assess local wound
 - length, breadth and depth
 - cleanliness or otherwise
 - vitality of tissues
 - infection and extent
 - surrounding tissues

17.12.5 **MANAGEMENT PLAN**

Optimise Systemic Condition

- nutrition
- medication
- oxygenation
- diabetic control
- immune suppression status
- infection

Rational local treatment

17.12.6 **GOALS OF LOCAL WOUND TREATMENT**

- Convert to surgically clean wound
- Debride necrotic tissue
- Treat / prevent local infection
- Protect surrounding tissue
- Protect wound against trauma eg with splints
- Absorb excess exudate
- Drain excess fluid e.g. blood or pus

17.12.7 **DECONTAMINATION OF WOUNDS**

- Copious irrigation and scrubbing of contaminated wound eg after MVA

- Diversion of excreta eg colostomy
- Control fistula effluent or excess exudate eg use wound management bag or Vacuum Assisted Wound Care System

17.12.8 **WOUND DEBRIDEMENT**

- Mechanical or surgical
- Chemical eg aserbine
- Autolytic (moist wound care dressing)

17.12.9 **ANTISEPTIC WOUND TREATMENT**

- **Do not** put into a wound that which you would not put into **your own eye**
- Inorganic halides and alcohols eg chloride and iodine based antiseptics are **banned**
- Organic antiseptic at **correct** strength eg Povidone Iodine, aqueous Chlorhexidine can be used
- Do not use EUSOL, Mercurochrome or Gentian Violet

17.12.10 **PROPHYLAXIS AGAINST INFECTION**

General Antisepsis

Antimicrobial Application

- local
- systemic

Choice of antimicrobial therapy is based on predicted or proven infective agent(s)

17.12.11 **MOIST WOUND CARE**

Moist wounds heal faster than **dry** wounds

- Dryness desiccates inflammatory cells and new epithelium
- Moist healing accelerates inflammatory process
- Epithelial cells migrate easily across moist wound surface
- Moist environment enables proteolyses of dead tissue

Caveat: Guard against maceration of normal tissues

Dry dressing removes new epithelium on changing or removal

17.12.12 **CLASSES OF WOUND DRESSINGS**

- Films eg Opsite, Tegadermminic skin, used for fresh dry wounds
- Hydrocolloids eg Granuflex, Comfeel: absorbant and debrides by autolysis, used in any wound
- Hydrogels eg Intrasite gel, Elastogel - creates moist environment but low absorbency used for non-exudative wounds
- Foams eg Allevyn high absorbancy and debrides, used in sloughy wounds
- Impregnates eg Adaptic - impregnated with moisturizer or antimicrobial, promotes moist healing or antimicrobial activity, used in partial thickness wounds with minimal exudate
- Absorptive powders or pastes eg Hydrogran: high absorbency and debrides, used in chronic wounds with copious exudate or slough
- Biologic dressing e.g. natural skin, bio-engineered skin, animal skin (pig) or amniotic membrane. Provides natural cover used for large burns
- Wound management bag e.g. Holister - oversize “stoma” bag used to collect fistula or high volume exudate

- Vacuum Assisted Wound Care System – low vacuum assisted wound management removes excess fluid e.g. blood, fistula effluent. Helps bring wound edges together. Stimulates inflammatory response

17.12.13 MONITORING OF WOUND CARE

Could care hinder healing - YES

- frequent changes of dressing
- inappropriate dressing material
- Inappropriate antiseptic
- dry dressing
- too frequent wound inspection could hinder wound healing

17.12.14 SUMMARY: SCIENTIFIC WOUND CARE SHOULD BE BASED ON PATHOPHYSIOLOGY

ASSESS WOUND QUALITY

Classify wound

Assess local tissue health, perfusion and sepsis

Correct abnormalities and optimise local tissues

Select appropriate local wound Management stratagem

Select most suitable dressing

ASSESS PATIENT HEALTH QUALITY

General health status esp O₂ carrying capacity

Nutritional status

Immunological status esp HIV/AIDS, DM

Correct abnormalities and optimise general health

Remember!

▪ DON'TS

- Do not apply to wound what you wouldn't apply to your own eyes e.g. No eusol, mercurochrome, gentian violet, hydrogen peroxide or inorganic iodine, potassium permanganate
- Do not desiccate the wound
- Do not apply dry dressing **NB paraffin gauze becomes a dry dressing after couple of days**

▪ DO'S

- Apply moist wound care dressing
- Inspect wound would only if there is excessive pain, erythema or otherwise unexplained pyrexia
- Only change dressing if excessively soiled or saturated with exudate.

17.13 Bite Wounds

All bite wounds are contaminated and can result in serious infection or the transfer of systemic zoonotic microbes. The most common bites are inflicted by dogs, cats and humans. Correct management of such wounds is necessary to prevent serious consequences.

The organisms that cause wound sepsis include aerobes such as pasteurella, staphylococcus, neisseria, corynebacterium and moraxella, and anaerobes such as fusobacterium, bacteroides and peptostreptococcus. Infection is usually polymicrobial.

Wounds must be thoroughly cleaned and copiously irrigated in the emergency department. Minor debridement and cleaning can be done under local anaesthetic. Puncture wounds must be irrigated in their depth. Major wounds and those of the hands must be cleaned and debrided under general anaesthetic. Bites to the hand commonly involve joints and tendons and can lead to serious sequelae. Swabs for MCS should be taken from wounds displaying any signs of sepsis and those presenting late.

In general bite wounds should not be sutured primarily. Wounds of the hand should be allowed to heal by secondary infection. Facial wounds can be sutured primarily with suitable antibiotic coverage. All other wounds should be sutured secondarily after 24-48 hours.

Antibiotics should be prescribed in the more serious wounds, those presenting late and those sutured primarily. The most appropriate antibiotic is co-amoxiclav. For penicillin-allergic patients co-trimoxazole or fluoroquinolones can be used.

17.14 Rabies

Rabies is transmitted by the bite of an infected animal. Human disease is almost universally fatal. Rabies can be prevented after a bite by a rabid animal by appropriate immunization (post-exposure prophylaxis). Ninety percent of cases are due to dog bites.

Post-exposure vaccination should be administered in specific circumstances only:

- Bite by known rabid animal.
- Bite by an animal that develops rabies after 10 days of confinement
- Bite by an animal suspected of having rabies: aberrant behaviour such as domestic pet becoming inappropriately vicious, wild animal inappropriately docile, nocturnal animal roaming during daytime, unprovoked bite in an area where rabies is currently prevalent
- Get certificate of dog vaccination or otherwise, if the dog is a stray, get it hunted down and examined for rabies (must be killed and its brain examined)

Management:

1. The wound must be thoroughly cleaned with water and antiseptic soap. Deep wounds must be irrigated.
2. Administer vaccine when indicated to patients not previously vaccinated and arrange for a complete vaccination course. A booster should be administered to previously vaccinated patients.
3. Administer 20 IU/kg body weight of human or 40 IU/kg of equine rabies immunoglobulin. Inject as much as possible around the bite wound and the rest intramuscularly at a site remote from the wound and the vaccination.

17.15 Necrotising soft tissue infections

These infections have serious implications as they can lead to severe morbidity and even death in up to 30-40%. The infections are usually polymicrobial, including anaerobes, but can be due to a single organism such as clostridium perfringens (gas gangrene) or group A streptococcus or Vibrio spp. It is important to recognise these infections because they require aggressive antibiotic and surgical treatment. They occur more readily in diabetics, patients receiving cancer therapy, or immunosuppressed patients or vasculopathies. They can occur at any site in the body but typical sites are the peri-urethral perineum (Fournier's gangrene), peri-anal and the abdominal wall. They develop in deep anaerobic conditions including penetrating wounds.

The typical clinical picture is not always present. The patient is usually toxic and tachycardic and may be confused. Pain may be out of proportion to what is found in the affected area, especially in case of a deep wound. Gray watery fluid may drain from a wound. The skin is typically indurated, copper coloured, and brawny. Blebs and crepitus will be present.

Management

1. Resuscitate.
2. Take microbiology specimens—tissue or fluid rather than swabs. Request the result of urgent gram stains for clostridium perfringens (gram + rods). Anaerobic specimens should also be taken.
3. Broad spectrum antibiotics should be started empirically. In case of gas gangrene (Cl perfringens) high doses of penicillin should be administered.
4. Schedule urgent surgery. This entails aggressive debridement, drainage, wound cleaning and open wound management. The patient must be booked for further surgical debridement's until the wound is clean. Follow the motto: **redebride until there is no necrosis or no patient.**

18. Timing and Dissertation

MEMO

Timing of Dissertation Submission-Registrarship and MMed Background

The following guidelines as from 1 January 2016 are:

1. Guidelines for Post Graduate studies at the University of Pretoria:
 - Projects should be registered and passed through the MMed Committee, prior to intermediate or otherwise within the two years of enrolling.
 - The Draft Project should be completed prior to the writing of the exam. The Draft confirms that the scientific part is running parallel.
 - The Criteria of Form 57 is not fulfilled if there is no a Form 59.
 - The Candidate will not be able to register until requirements are being met.
 - It is in the interest of the Candidate to complete research prior to the exam and if not ready preferably to postpone.
 - Part one is the pre-requisite within the first 18 months after enrolling for MMed.
 - There are two guidelines for the 1) Surgical Disciplines which have the intermediate and 2) Medical Disciplines which do not have the Intermediate.

- TNM attendance should be done by the Intermediate stage of the course. NB TNM course slots are competitive. These should be booked early. Prof Mulaudzi and Dr Jackson run a TNM course for the Department.
 - There are 18 months to complete research work.
 - If the exam is going to be written in Semester 2 of the 4th year then the Research Dissertation should be submitted by 1 June of the 4th year.
 - The Supervisor should sign the form which stipulates that the Candidate will complete the Draft project within the next 3 to 6 months.
2. **Completion process of Forms 57 and Form 59**
- The HPCSA Form 59 is available.
 - Form 57 is used by the University and certifies the time spent at the University, signed by the Head of the Department, the Dean and the CEO of the Hospital where the person was appointed.
 - **NB** The new chair of School of Medicine requires a pass mark for MMed Thesis by external examiner before a Candidate may be signed off for registration with HPCSA.
 - Student Administration verify the information and then to be handed in at the HPCSA.
3. **Research Support Structure**
- Registrar research support is available to the Registrars. A new Database was developed by the CSIR to be utilized in all Disciplines and will be available in due course.
 - The MMed Protocol Committee provides support and advice to unsuccessful Candidates and are being referred to the Statistician, Prof P Becker and reviewed after a period i.e. month or two for approval.
 - Prof J Pillay is the Chair of the School of Medicine Research Committee (Rescom) and programmes are offered i.e. Train the Trainers and support for the individualized Candidate.
 - Departments have Research Committees who are able to suggest proposals. Rescom have meetings with the Research Committees and there is availability of resources. The Clusters are available to smaller or Departments as a resource and support.

18.1 Preparation of Assigned Academic Topic

- i) Topics are assigned well in advance. Prepare the topic and consult with moderator in good time, both the principal topic presenter and commentators must read widely around the given topic. The presenter must have at least 15 references of seminal original articles and reviews, preferably meta-analysis type.
- ii) The presentation must be circulated 10 (ten) days before the presentation date as a manuscript.
- iii) The manuscript must be updated with comments from discussions at the presentation and posted on the Department website.

18.2 Continuous Assessment

18.2.1 Registrars will have their logbook inspected regularly by Head of Unit and Head of

Department

18.2.2 Consultants will appraise/assess registrars for different aspects of learning including Patient. Preparation, presentation, operations and follow up.

18.2.3 Consultants should complete forms for evaluating formal topic presentation, journal club discussions and exam cases orals.

18.2.4 There will be regular progress tests:

- i) MCQ
- ii) OSCE

18.2.5 It is expected that registrars will attend at least 80% of tuition and assessment test session. If a registrar attends less than 60% of the session without formally having been put on leave she/he will not be allowed to proceed write until 80% attendance learning the following 12 month has been achieved.

18.3 Registrar should sign acknowledgement of all the requirement set out herein.

18.3. 1 Acknowledgement and Undertaking by Registrar/Medical Officer on Joining the General Surgery Specialisation Programme

The form should be updated as necessary.

Name of Registrar:.....

HPCSA Registration Number:.....

University of Pretoria MMed Student Registration Number:.....

Date of Commencement of Training:.....

Date of Registration of MMed:.....

Date and Number HPCSA Training Number Assignment:.....

Date of Obtaining Primary FCS/MMed Exam:.....

If not obtained yet, give the projected date (within 12 months):.....

Registrar/MO must obtain Primaries with 18 months, otherwise will have to leave the training programme and re-apply after obtaining the said Primary.

Projected date for writing intermediate FCS/MMed exams (this must be within 20 months of joining the programme).....

NB: Permission to write Intermediate exams requires approval of MMed research protocol by Postgraduate MMed Committee.

Registrars are required to attend TNM Research Course before submitting committing their research protocol to MMed Committee

NB: Research may not commence before Ethics Committee approval

Projected date of writing of Final FCS Exam

NB: Permission to write the Final FCS will only be granted after a draft of MMed dissertation has been signed off by the supervisor as to the quality of the research and its satisfactory interpretation and write up.

Registrars are expected to write the final FCS within 5 years of admission to the training programme. (Minus any time out spent for any reason including maternity leave).

NB: Medical Officers may be credited for upto 12 months of their training within the Department for their registrar training.

The registrar further acknowledges that s/he has to attend to 60% or more of the scheduled formal training/teaching events including progress tests before s/he can be permitted to write final FCS exam. Failure to attain 60% attendance will result in extra training to make up the deficit.

I.....(Name) HPCSA Registration Number..... and HPCSA trainee number..... and UP Student Number.....acknowledge and pledge to abide by the rules herein given and further that I shall abide by any new rules that may be made by University and the Department from time to time.

.....
Signature of Registrar/MO

.....
Date

.....

.....

Signature of Head of Department/Deputy Date

Supplementary signatures for updates (Attach update note)

.....
Registrar/MO Date

.....
Head of Department/Deputy Date

Further Supplementary signatures for update (Attach update note)

.....
Registrar/MO Date

.....
Head of Department/Deputy Date