Fakulteit Gesondheidswetenskappe

Faculty of Health Sciences

School of Medicine

MBChB II & BChD II
Block 2 (BOK 284/283)
PEOPLE AND THEIR ENVIRONMENT

2009





UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA
Denkleiers • Leading Minds • Dikgopolo tša Dihlalefi

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1. INTRODUCTION TO BLOCK 2

Welcome to Block 2. We trust that you will find this a stimulating and enriching period of six weeks for study and the development of your skills.

The subject codes are **BOK 284** (MBChB) and **BOK 283** (BChD): People and their environment.

Within the main theme of the block, "People and their environment", the following sub-themes will be addressed:

i) **Forensic Medicine**
ii) **Society's Health and Ethics;**
iii) **Health Research;**
iv) **Personal Life;**
v) **Adverse Life Events;**
vi) **Doctor-patient relationship**

The block is continuously being improved, drawing from the latest educational and topical research, and our and students' evaluations of previous years. Therefore, do not assume that the block will be the same as previous years.

Although the acquisition of knowledge is no less important in this block than other blocks, the emphasis is very much on the acquisition of skills and abilities to apply knowledge, as well as personal growth. We like to encourage you to shape your expectations of the block accordingly.

We hope that your expectation would be to develop an appreciation for and directedness towards equipping yourselves personally with the necessary skills and abilities to apply your knowledge and skills. This would require much more than the study of class notes. It requires that you participate personally in the class to examine problems and demonstrations, and thereby expand your personal repertoire of experiences. An analogy might help here: someone could not learn to swim by merely studying notes on swimming. Many of the activities of this block are about your personal experiences, preparing you for things in medicine or dentistry which cannot be captured adequately in notes. Be sure, nonetheless, that the factual as well as the non-factual aspects of this block are derived from the best available research on a particular topic.

According to such broader expectation of the block, the assessment will not merely ask for a "regurgitation" of learned information. You will be asked to demonstrate your mastery and effort in other ways too. This is meant as an encouragement, as we would like to reward good mastery with good marks. If you get 60% or more as a final block mark and have met all the requirements, you will have the privilege to be promoted to the next block and will be exempted from the block examination scheduled for the end of the semester.

PLEASE BRING YOUR BLOCK BOOK ALONG EVERY DAY

2. SUBJECT REPRESENTATIVE (LECTURERS)

Block chairperson: Professor C.W. van Staden

Dept / Representative	Telephone	Address	Fax	E-mail
Block Chairperson: Prof CW van Staden (Dept of Psychiatry)	319 9720	Room 4 Auditorium Building, Weskoppies Hospital	319 9617	cwvanstaden@icon.co.za
Dept. of Family Medicine: Dr M van Rooyen	354 2144	Room 7-35 HW Snyman North	354 1317	mvrooyen@med.up.ac.za
Dept. of Psychiatry: Prof D vd Westhuizen	319 9500 (bleeper)	Room 2 Auditorium Building Weskoppies Hospital	319 9617	erna.fourie@up.ac.za
Clinical Psychology: Ms N Theron	354 6106	Department of Psychiatry, Steve Biko Academic Hospital, Level 7, Room 72427	3543818	amanda.vangreunen@up.ac.za
Dept. of Forensic Medicine: Prof G Saayman	323 5298 319 2122	Room 4-44 Institute for Pathology	323 0921	gsaayman@postillion.up.ac.za
Division of Human Genetics: Dr EM Honey	310 2269 319 2626 0825795315	Room 5-53 Institute for Pathology	323 2788	ehoney@medic.up.ac.za
Ethics: (Dept.of Psychiatry): Prof CW van Staden	319 9720	Room 4 Auditorium Building, Weskoppies Hospital	319 9617	cwvanstaden@icon.co.za
School of Health Systems and Public Health: Dr L Seymore, Dr G Louwagie & Mrs E Webb	354 1770 354 1803	HWS North Room 5-21 & 5-26	354 2071	elize.webb@up.ac.za leon.seymore@up.ac.za goedele.louwagie@up.ac.za
Community Dentistry: Prof P J van Wyk	319 2419/8	Room 6-43.2, D&O Hospital		pjvanwyk@medic.up.ac.za

SECRETARY: Mrs A van Greunen, tel 354 3818, Department of Psychiatry, Steve Biko Academic Hospital, Level 7, Room 72427, E-mail: amanda.vangreunen@up.ac.za

3. OBJECTIVES OF BLOCK 2: People and their environment

- To lay a solid foundation for the main themes of this block, which will be developed further during the course of the curriculum in subsequent blocks and clinical rotations;

- To become aware and sensitive to contextual and environmental aspects within which patients develop, live and present with their difficulties;

- To become aware and sensitive to contextual and environmental aspects within which doctors attend to health matters;

- To appreciate and develop the basic interpersonal skills required in clinical settings;

- To appreciate what “public health” is about;

- To develop an understanding of ethical aspects and moral obligations in sickness and health, with regard to the community and patients;

- To develop the skills by which the student can work efficiently and justifiably with the operations of values and facts in health care;

- To come to a basic understanding of, and develop basic skills in, health research in the community.

- To gain an understanding of the role and the duties of the medical practitioner within the South African legal system, especially with regard to interpersonal violence in society, injuries, death and the process of dying;

- To understand disabilities in the South African society which result from genetic abnormalities.

4. STUDY OBJECTIVES

The objectives of block 2 as listed above are best met through active participation in class, for much of the learning in block is about going though certain experiences rather than merely about memorising facts.

Study objectives for assessment and examination purposes are entirely encapsulated in the doing of the *case studies* and the *health research project* as prescribed below.

5. COURSE CONTENTS OF BLOCK 2

Theme	*Topic*
1	Introduction - Conceptual overview & objectives of block 2
I	***Forensic Medicine***
2	Introduction to Forensic Medicine
3	South African Legal System
4	Death: Statutory Provisions
5	Medico-legal investigation of death
6	Medical criminalistics
7	Thanatology: post mortem changes
8	Pathology of trauma 1, 2 & 3
9	Medical Law 1-5
10	Pathology of trauma 4 & 5
11	Poisoning and forensic toxicology
12	Clinical forensic medicine
II	***Society's Health & Ethics***
13	Introduction to Public Health and the role of Epidemiology in Public Health:
14	Measuring health, disease and interventions
15	Introduction to study design
16	Data collection and measurement
17	Causation
18	Introduction to bio-statistics: exploring and presenting data
19	Introduction to bio-statistics: analizing and interpreting data
20	Introduction to bio-statistics: population and sampling
21	Screening procedures
22	Clinical epidemiology
23	Evidence and Health Policy
24	Medical genetics in South Africa
25	What might ethics be? Why ethics? Varieties of ethics in medicine
26	Beneficence and non-maleficence
27	Respect for people
28	Informed consent
29	Research Ethics
30	Ordinary and extraordinary obligations
31	Distributive justice
32	Ethics and public health
33	Incapacity to give informed consent owing to mental disorder
34	Deception in Medicine
35	Confidentiality
36	Workshop: Awareness of values
37	Working with values (case study)
38	Pointers of values based practice, evidence, & ethics
39	Ethics in the African context
40	Oaths & professional codes
III	***Health Research***
41	Introduction to projects
42	Practical issues in writing a protocol
43	Meet with research supervisors
44	Write protocols

IV	***Personal Life***
45	Family systems, life cycles & genograms
46	Adolescents & leaving home (parents & children)
47	Cultural diversity
48	Relationships
49	My love relationships
50	Sexuality
51	Stress management
52	Life style planning and priotising
V	***Adverse life events***
53	Illness and disease
54	Dealing with chronic illness
55	Disability
56	Abuse, battering and rape
57	Alcohol and substance abuse
58	Dealing with interpersonal/group conflict
59	My colleagues and my own vulnerability to trauma
60	Breaking of bad news
61	Relationship with a dying patient
62	Grief & bereavement
63	Suicide
64	Euthanasia
VI	***Doctor-patient relationship***
65	Fundamentals
66	Comprehensive history taking
67	Interview skills
68	Consultation framework
69	Patient-centred consultation
70	Negotiated management plans
71	Health information & motivational interviewing
72	Problem solving & critical thinking
73	Dealing with uncertainty & professional mistakes
74	Role play exercises

6. SCHEDULES, VENUES AND GROUPS

***Time schedule**:*

The time schedule provides the name of the main sub-theme (e.g. Adverse Life Events), the lecturer, and the topic of each session in the applicable square. The lectures and other activities follow a line of thought that builds on the previous experiences you would have gone through. The structural connections between the various activities are outlined on page 6.

Attendance:

Students should attend all lectures, seminars, group and other educational activities. This block is designed in a practical way whereby students who attend classes will do better and experience the block as being easier. ***Your attention is drawn to the policy of the Faculty with regard to practical sessions, which are considered compulsory and where 100% attendance is required. All the lectures are practically oriented and absence from these may lead to a student not promoting from the block and/or being refused entrance to the examination.***

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***Groups**:*

Forensic autopsies and the **role play activities** are performed in main groups according to the letter with which your surname begins. The groups for the **research projects** are set by administration Please stick to the groups to which you have been selected.

The groups for the work on **the case studies** have to be set electronically by the students themselves via the Click-UP-system (via UP webpage) program. The **deadline** for setting up these groups is **Friday 22nd of May 2009.**

Venues:

Activities directed by lecturers take place in **BMW 3-3.**

Forensic necropsies take place in the **necropsy theatre** at the Institute of Pathology.

Take note of venues for the block test as made public on the notice boards.

Should there be any problems, please contact Mrs A van Greunen, at the Steve Biko Academic Hospital, level 7 (room 72426), telephone number 012 354-3818 or Mrs E Fourie at Weskoppies Hospital Auditorium, tel no 012 319 9720.

Week 1

TIME	MONDAY 11/5	TUESDAY 12/5	WEDNESDAY 13/5	THURSDAY 14/5	FRIDAY 15/5
08:00-08:50	**Introduction**: Conceptual overview and objectives for block 2 *Prof CW van Staden*	**Forensic Medicine** Thanatology *Dr SH Rossouw*	**Forensic Medicine** Medical Law 1 *Prof P Carstens*	**Forensic Medicine** Pathology of Trauma 4 *Prof G Saayman*	**Forensic Medicine** Case discussion *Prof G Saayman*
09:00-09:50	**Forensic Medicine** Introduction to Forensic Medicine *Prof G Saayman*	**Forensic Medicine** Post mortem changes *Dr SH Rossouw*	**Forensic Medicine** Medical Law 2 *Prof P Carstens*	**Forensic Medicine** Pathology of Trauma 5 *Prof G Saayman*	**Forensic Medicine** Case discussion *Prof G Saayman*
10:00-10:50	**Forensic Medicine** South African Legal System *Prof G Saayman*	**Forensic Medicine** Pathology of Trauma 1 *Prof G Saayman*	**Forensic Medicine** Medical Law 3 *Prof P Carstens*	**Forensic Medicine** Poisoning / Forensic Toxicology *Dr SH Rossouw*	**Forensic Medicine**
11:00-11:50	**Forensic Medicine** Death: Statutory Provisions *Prof G Saayman*	**Forensic Medicine** Pathology of Trauma 2 *Prof G Saayman*	**Forensic Medicine** Medical Law 4 *Prof P Carstens*	**Forensic Medicine** Clinical Forensic Medicine *Dr L du-Toit-Prinsloo*	**Forensic Medicine**
12:00-13:00	**Forensic Medicine** Death: Statutory Provisions *Prof G Saayman*	**Forensic Medicine** Pathology of trauma 3 *Prof G Saayman*	**Forensic Medicine** Medical Law 5 *Prof P Carstens*	**Forensic Medicine** Clinical Forensic Medicine *Dr L du-Toit-Prinsloo*	**Forensic Medicine**
13:00 - 14:00			**LUNCH**		
14:00 – 15:00	**Forensic Medicine** Medico-Legal Investigation of Death	**Forensic autopsy:** Surnames starting with A - I	**Forensic autopsy:** Surnames starting with J - N	**Forensic autopsy:** Surnames starting with O - Z	**Forensic Medicine** **ASSESSMENT** **(a pass is required for promoting)**
15:15 – 16:00	Medical Criminalistics				

TIME	MONDAY 18/5	TUESDAY 19/5	WEDNESDAY 20/5	THURSDAY 21/5	FRIDAY 22/5
08:00-08:50	**Society's Health & Ethics** Introduction to Public Health and the role of Epidemiology in Public Health *Dr L Seymore/Dr G Louwagie*	**Society's Health & Ethics** Introduction to biostatistics: Exploring/summarizing and presenting data *Dr L Seymore/ Dr G Louwagie*	**Society's Health & Ethics** Medical Genetics in S.A.. *Dr E Honey*	**Society's Health & Ethics** Ordinary and extraordinary Obligations *Dr L Schoeman*	**Health Research** Present protocols to supervisors & do revisions
09:00-09:50	**Society's Health & Ethics** Measuring health, disease & interventions *Dr G Louwagie/Ms E Webb*	**Society's Health & Ethics** Introduction to biostatistics: Analyzing and interpreting data *Dr L Seymore/ Dr G Louwagie*	**Society's Health & Ethics** Medical Genetics in S.A.. *Dr E Honey*	**Society's Health & Ethics** Distributive justice *Dr T Rossouw*	**Society's Health & Ethics** Workshop: Awareness of values *Prof CW van Staden*
10:00-10:50	**Society's Health & Ethics** Introduction to study esign *Dr G Louwagie/Ms E Webb*	**Society's Health & Ethics** Introduction to biostatistics: Population and sampling *Dr G Louwagie/Ms E Webb*	**Society's Health & Ethics** What might ethics be? Why ethics? Varieties thereof *Prof CW van Staden*	**Society's Health & Ethics** Ethics and public health *Dr T Rossouw*	**Society's Health & Ethics** Workshop: Working with values (case study) *Prof CW van Staden*
11:00-11:50	**Society's Health & Ethics** Data collection and measurement:: questionnaire design/ record review/ introduction to reliability and validity *Dr S Moodley/ Dr G Louwagie*	**Society's Health & Ethics** Screening Procedures *Dr G Louwagie/Ms E Webb*	**Society's Health & Ethics** Beneficence and non-maleficence *Dr A Vlok*	**Society's Health & Ethics** Incapacity to give informed consent owing to mental disorder *Prof CW van Staden*	**Society's Health & Ethics** Pointers of Values Based Practice; Values, evidence, & ethics *Prof CW van Staden*
12:00-13:00	**Society's Health & Ethics** Causation *Dr S Moodley/ Dr G Louwagie*	**Society's Health & Ethics** Clinical epidemiology (4) *Prof P Rheeder*	**Society's Health & Ethics** Respect for people *Dr L Schoeman*	**Society's Health & Ethics** Deception in medicine *Prof CW van Staden*	**Society's Health & Ethics** Ethics in the African context *Prof P Duvenhage*
13:00 - 14:00			**LUNCH**		
14:00-14:50	**Health Research** Introduction to projects *Ms E Webb*	**Society's Health & Ethics** Evidence and Health Policy *Prof E Buch*	**Society's Health & Ethics** Informed Consent *Dr L Schoeman*	**Society's Health & Ethics** Confidentiality *Prof CW van Staden*	**Society's Health & Ethics** Oaths & professional codes *Prof D Lombard*
15:00-15:50	**Health Research** Practical issues in writing a protocol *Ms E Webb*	**Health Research** Write protocols	**Health Research** Research ethics *Dr R Sommers*		**Society's Health & Ethics** Oaths & professional codes *Prof D Lombard*
15:50-17:00	**Health Research** Meet with research supervisors Write protocols		**Health Research** Present draft protocols to supervisors & do revisions	**Health Research** Write protocols	**Health Research** Write protocols

TIME	MONDAY 25/5	TUESDAY 26/5	WEDNESDAY 27/5	THURSDAY 28/5	FRIDAY 29/5
08:00 – 08:50	**Health Research** Write protocols	**Personal Life** Sexuality *Dr PH de Wet*	***L-CAS:*** Do *Real-Life Clinic Studies* in community clinics	**Adverse Life Events** Illness and disease *Dr M van Rooyen*	**Adverse Life Events** Abuse, battering & rape *Ms KS Michael*
09:00 - 09:50	**Health Research** Meet with supervisors about protocols	**Personal Life** Sexuality *Dr PH de Wet*		**Adverse Life Events** Dealing with chronic illness Dr M van Rooyen	**Adverse Life Events** Abuse, battering & rape *Ms KS Michael*
10:00 - 10:50	**Personal Life** Family systems, life cycles & genograms *Ms L Hyson-Velleman*	**Personal Life** Stress Management *Prof J Scholtz*		**Adverse Life Events** Disability *Dr E Honey*	**Adverse Life Events** Alcohol and substance abuse *Mr K Coetzee*
11:00 – 11:50	**Personal Life** Adolescents & leaving home (parents & children) *Dr M van Rooyen*	**Personal Life** Stress Management *Prof J Scholtz*		**Adverse Life Events** Disability *Dr E Honey*	**Adverse Life Events** Dealing with interpersonal/group conflict *Ms D Macklin / Ms N Theron*
12:00 - 13:00	**Personal life** Cultural diversity *Ms L Nkosi*	**Personal Life** Life style planning & prioritising *Dr M Nolte*		**Adverse Life Events** Disability *Dr E Honey*	**Adverse Life Events** My colleagues and my own vulnerability to trauma *Ms C Grobler*
13:00 - 14:00	LUNCH				
14:00 - 14:50	**Personal Life** Relationships *Ms KS Michael*	***14:00 Submission of protocols*** *Do case studies*		*Do case studies*	*Do case studies*
15:00 - 15:50	**Personal Life** Relationships *Ms KS Michael*				
16:00 - 16:50	**Personal Life** My love relationships *Dr M Nolte*				

Week 4:

DAY/TIME	MONDAY 1/6	TUESDAY 2/6	WEDNESDAY 3/6	THURSDAY 4/6	FRIDAY 5/6
08:00 – 08:50	**Adverse Life Events** Breaking of bad news *Ms N Theron*	*Do case studies*	**Dr-patient relationship** Fundamentals *Prof D vd Westhuizen*	**Dr-patient relationship** Negotiated management plans *Dr M van Rooyen*	*Group work on case studies* *Making arrangements for projects* *Make final corrections to research protocols*
09:00 – 09:50	**Adverse Life Events** Relationship with a dying patient *Dr S Hitchcock*		**Dr-patient relationship** Comprehensive history taking *Prof D v d Westhuizen*	**Dr-patient relationship** Health information & motivational interviewing *Dr M van Rooyen*	
10:00 – 10:50	**Adverse Life Events** Grief & bereavement *Ms M Morkel*	**Research group leaders present at Ethics Committee meeting** *Rest of students do case studies*	**Dr-patient relationship** Interview skills *Prof PM Joubert*	**Dr-patient relationship** Problem solving & critical thinking *Prof D Cameron*	
11:00 – 11:50	**Adverse Life Events** Suicide *Ms N Theron*		**Dr-patient relationship** Consultation framework *Dr M van Rooyen*	**Dr-patient Relationship** Dealing With Uncertainty & Professional Mistakes *Prof D Cameron*	
12:00 – 13:00	**Adverse Life Events** Suicide *Ms N Theron*		**Dr-patient relationship** Patient-centred consultation *Dr M van Rooyen*	**Dr-patient Relationship** Dealing With Uncertainty & Professional Mistakes *Prof D Cameron*	
13:00 – 14:00	**LUNCH**				
14:00 – 16:00	**Adverse Life Events** Euthanasia *Prof P Duvenhage*	**Research group leaders present at Ethics Committee meeting** *Rest of students do case studies*	**Role play:** Surnames A -I **Do case studies:** Rest of students	**Role play:** Surnames J - M **Do case studies:** rest of class	***14:00 DEADLINE FOR CORRECTED PROTOCOLS*** **Role play:** Surnames O - Z **Do case studies:** rest of class
16:00 – 17:00	*Do case studies*		Meet with supervisors about final corrections of research protocols and do them	Meet with supervisors about final corrections of research protocols and do them	

Week 5:

TIME	MONDAY 8/6	TUESDAY 9/6	WEDNESDAY 10/6	THURSDAY 11/6	FRIDAY 12/6
08:00 – 08:50	***L-CAS:*** Do *Real-Life Clinic Studies* in community clinics	**Reflections on Real-Life Clinic Studies** *Dr M van Rooyen & Prof CW van Staden*	***Deadline for the submission of all the case studies: 08:00***	Self study	**Health Research** Data collection
09:00 – 09:50		*Group work on case studies*	Making arrangements for projects Self study	Making arrangements for projects	
13:00 - 14:00	**LUNCH**				
14:00 – 17:00	***L-CAS:*** Do *Real-Life Clinic Studies* in community clinics	*Group work on case studies*	Self study	**13:30 BLOCK TEST**	**Health Research** Data collection

Week 6:

TIME	MONDAY 15/6	TUESDAY 16/6	WEDNESDAY 17/6	THURSDAY 18/6	FRIDAY 19/6
08:00 - 08:40	**Health Research** Data collection	**PUBLIC HOLIDAY**	**Health Research** Data collection	**Health Research** Data analysis	**Health Research** Presentations of research
08:40 - 09:20					
09:20 - 10:00					
10:20 - 11:00	**Health Research** Data collection	**PUBLIC HOLIDAY**	**Health Research** Data collection	**Health Research** Data analysis	**Health Research** Presentations of research Peer assessment [compulsory attendance]
11:00 - 11:40					
11:40 - 12:20					
12:20 - 13:00					
14:00 - 15:00	**Health Research** Data collection	**Health Research** Data collection	**Health Research** Data analysis	**Health Research** Prepare presentation	**Free Afternoon**
15:00 - 16:30					

7. ASSIGNMENTS & ASSESSMENTS

7.1 Case studies

Case studies are very important in your learning of the material of block 2. You will be required to do literature research in doing these, notwithstanding that you may have picked up considerable guidelines in the lectures. Where appropriate, answers should be referenced.

You are required to do the case studies autonomously without the expectation that the lecturers would provide you with the "correct" answers. Thereby the aim is that you remain responsible as a life-long learner for the learning and application of your knowledge, like you should be one day when in a professional position. The answers and responses to the case studies may even be better potentially than would have been provided by your lecturers. The case studies are not necessarily about the "correct" answers, but are designed for you to go through motions that are valuable learning experiences in themselves. The assessment will be done accordingly (see the rubric for the assessment below).

These case studies will present again in the tests/exams, and will then be assessed in a way that is appropriate for tests/exams rather than the rubric-assessment that has been appropriate to the prior doing of the assignments.

You should work in small **groups** of no less than 2 but no more than 4 in doing these case studies, and they are required to be submitted as part of your **electronic portfolio assessment** on the Click-UP-system via the UP webpage. Students set the groups themselves on the Click-UP-system **no later than on the 22nd of May 2009.** No changes will be possible once loaded on the system. Make sure that your name is loaded in only one group.

IT IS CRITICALLY IMPORTANT THAT EACH STUDENT WORKS ON EACH ASPECT OF EACH CASE STUDY THEMSELVES. Thus, **do not divide the case studies or parts thereof among group members**. A paragraph is required in which the ways of working of the group are described in the declaration (see below) where you will affirm this requirement. A sensible way is for each student to work individually on each aspect of each case study first. Thereafter, the group can compare notes and make the necessary amendments, enrichments and make follow-up enquiries.

The case studies should be submitted in **TWO** independent sets. These are, one set that addresses the themes of **Society's Health and Health Research**; the other set that addresses the themes of **Ethics**, **Personal Life; Adverse Life Events; Doctor-Patient Relationship.**

The deadline for submission of the case studies is **08:00 on the 10th of June 2009**. Late submissions will not be accepted. Failure to submit case studies of satisfactory standard before the deadline may prevent a student from promoting.

These case studies are at the back of this block book. An electronic version is available on ClickUP that can be used as a template on which you can work.

7.2 Health Research projects (Special Study Module - SMO 211)

As part of the Special Study Module (SMO-211), research projects are undertaken in groups of 6 people each. Both the participation of students in the entire research project as well as the outcome of the research will be assessed.

Satisfactory completion of the study module is required for all students. Students who do not participate and complete their research projects satisfactorily will have to re-do them after block 2 in their spare time (or vacation period).

This Special Study Module involves a research project being conducted and completed by a group. Students will be working in groups of six (6) according to the groups compiled by the Academic Administration. Medical and Dental groups will be working separately on appropriate topics. All groups will be given a research project that has been set up in collaboration with the City of Tshwane Health Department (research will be done in clinics), Provincial clinics, Steve Biko hospital, Kalafong hospital, Tshwane District hospital in and around Pretoria as well as the University of Pretoria Oral and Dental hospital. Research could also take place in private health care facilities. Students or groups will not be allowed to change groups or topics.

The following aspects are important for the research projects:

1. A research protocol has to be compiled by the group.
2. The research protocol has to be submitted to the Faculty of Health Sciences Student Ethics Committee **and approved** before the research can start.
3. The research is to be conducted during Week 6 of the Block and will culminate in a Group Research Report to be submitted on Friday, 19 June 2009 as well as a group presentation on the same day (Using Powerpoint; role-play etc.). The group reports will be shared with the institutions where the research was conducted and members of the Faculty will be invited to attend the presentations of the research projects.
4. Students are to adhere to all DUE DATES for the research projects.
5. Each group will be allocated a supervisor from the School of Health Systems and Public Health or the Department of Community Dentistry. Groups are to set up meetings with their allocated supervisors that suits both parties to discuss their protocol and other issues related to their research project (time has been allocated in the Block book for this activity).
6. Assessment of the research projects will be based on the group presentation, the group report as well as individual marks by group members for group participation.

7.3 Block test

The block test is written at the end of week 5 and will contain some of the case studies (see section 11 below) and may also include multiple choice questions on the ethics-related topics.

7.4 Calculation of marks

Block test 50%.
Case studies, set no 1: 20%
Case studies, set no 2: 30%

7.5 Declarations

Students are required to sign a **declaration** (see in last pages of the block book; also on the website) when submitting their case studies about these being their own work. Do **acquaint yourself with the requirements set out in these declarations prior to doing the various assignments.** Students who commit plagiarism or an untruthful declaration will be subjected to disciplinary proceedings. The declarations should be submitted electronically with each of your sets of assignments. Failure to complete the prescribed declarations may lead to a student forfeiting promotion without an examination.

7.6 Attendance requirements

Students should attend all lectures, seminars, group and other educational activities. This block is designed in a practically way whereby students who attend classes will do better and experience the block as being easier. *Your attention is drawn to the policy of the Faculty with regard to practical sessions, which are considered compulsory and where 100% attendance is required.* ***All the lectures are practically oriented and absence from these may lead to a student not promoting from the block and/or being refused entrance to the examination.***

7.7 Assessment rubric

Rubric for Assessment of CASE STUDIES

	Levels of achievement				
Assessment criteria	*Full marks!*	*Above average*	*Average*	*Well below average*	*Should fail*
1. Completeness	Complete with extensive elaboration where appropriate	Complete with sufficient elaboration where appropriate	All questions are answered but somewhat scantily	A few questions are not answered	Several questions are not answered or most questions are scantily answered
2. Thoroughness and comprehensiveness	Can hardly be any better - excellent	Very Good	Satisfactory	Should be better	Inadequate
3. Accuracy and responsible deliberations	Can hardly be any better - excellent	Very Good	Satisfactory	Should be better	Inadequate
4. Insight into depth and scope of problem	Can hardly be any better - excellent	Very Good	Satisfactory	Should be better	Inadequate
5. Use of literature and resources	Can hardly be any better - excellent	Very Good	Satisfactory	Should be better	Inadequate

7.8 Sickness during tests and first examination

The general rules of the Faculty and University apply (you are strongly urged to inform yourself about these). You must notify the chairperson of the block (by contacting Mrs A van Greunen at the Dept of Psychiatry (012) 354 3819) **within 72 hours** of the commencement of the test or examination, which you missed, and then follow up your call with a medical certificate. No additional sickness tests or exams will be available. If a student does not do the block test, or the case studies, owing to sickness, he/she will not be exempted from the block examination.

7.9 Block Examination

Candidates who achieve 60% or more during the block, and who submitted case studies of satisfactory standard, passed the forensic medicine assessment at the end of week 1, and attended class satisfactorily may be exempted from the **block exam** in **June/July**. Students who have achieved less than 60% during the block or failed to submit satisfactory case studies, or failed the forensic medicine assessment at the end of week 1, must write the block exam in June/July. The official Faculty/University rules and regulations pertaining to examinations will apply. Students who fail the first examination may apply for admission to the second examination in November. Students who were ill during the first examination (June/July) may apply for the second examination in November. *No special*

examination provisions will be made for students who anticipate erroneously that they will promote/have promoted.

8. SUBJECT CODE

The subject is known as Block 2: "People and their environment" and the course codes are BOK 284 (MBChB) and BOK 283 (BChD). The research component carries the status of a special activity and is coded SMO211.

9. PRESCRIBED BOOKS

9.1 Joubert G, Ehrlich R, editors. Epidemiology: a research manual for South Africa. 2nd ed. Cape Town: Oxford University Press; 2007.

9.2 Shepherd RDMJ. Simpson's Forensic Medicine. 12th ed. London: Arnold; 2003. / Knight B. Simpson's Forensic Medicine. 11th ed. London: Arnold; 1997.

9.3 Mash B, editor. Handbook of Family Medicine. 2nd ed. Cape Town: Oxford University Press; 2006 / Mash B, editor. Handbook of Family Medicine. Cape Town: Oxford University Press; 2000.

10. RECOMMENDED BOOKS AND STUDY MATERIAL

*10.1 Beaglehole R, Bonita R, Kjellström T. Basic Epidemiology. Geneva: World Health Organization; 2006.

*10.2 Kaplan HI, Sadock VA. Kaplan & Sadock's Synopsis of Psychiatry: behavioral sciences, clinical Psychiatry. 9th ed. Philadelphia: Lippincott Williams & Wilkins; 2003. Chapters 1 & 2. / Kaplan HI, Sadock VA. Kaplan & Sadock's Synopsis of Psychiatry: behavioral sciences, clinical Psychiatry. 10th ed. Philadelphia: Lippincott Williams & Wilkins; 2007. Chapters 1 & 2.

*10.3 McDaniel SH, Campbell SH, Seaburn DB. Family-oriented primary care. 2nd ed. New York: Springer Science; 2005.

10.4 Willms JL, Lewis J. Introduction to clinical medicine. Baltimore: Williams & Wilkins; 1991.

10.5 Wiener JM, Breslin NA, editors. The behavioral sciences in psychiatry. 3rd ed. Baltimore: Williams & Wilkins; 1995.

10.6 Anderson CL. Patient teaching and communication in an information age. New York: Delmar Publishers; 1990.

*10.7 Mueller RF, Young ID. Emery's elements of medical genetics. 11th ed. London: Churchill Livingstone; 2001. (p287-291.)

Turnpenny PD, Ellard S. Emery's elements of medical genetics. 12th ed. Edinburgh: Elsevier; 2005.

Turnpenny PD, Ellard S. Emery's elements of medical genetics. 13th ed. London: Elsevier; 2007.

*10.8 Delport SD, Christianson AL, Van den Berg HJS, Wolmarans L, Gericke GS. Congenital anomalies in black South African liveborn neonates at an urban academic hospital. S Afr Med J. 1995; 85:11-15.

*10.9 Venter PA, Christianson AL, Hutamo CM, Makhura MP, Gericke GS. Congenital anomalies in rural Black South African neonates - A silent epidemic? S Afr Med J. 1995; 85:15-20.

*10.10 Christianson AL, Gericke GS, Venter P A, Du Toit JL. Opinion: Genetics, Primary Health Care and the Third World. S Afr Med J. 1995; 85:6-7.

10.11 Gillon R. Philosophical medical ethics. Chichester: Wiley; 1986.

10.12 Beauchamp TL, Childress JF. Principles of biomedical ethics. 5th ed. Oxford: Oxford University Press; 2001. (previous editions also available)

10.13 Campbell MJ. Statistics at square two: understanding modern statistical applications in medicine. 2nd ed. Oxford: BMJ Books; 2006.

10.14 Coggon D. Epidemiology for the uninitiated. London: BMJ; 1993.

10.15 Fink A. Conducting research literature reviews: from the Internet to paper. Thousand Oaks: Sage; 2005.

10.16 Greenhalgh T. How to read a paper; the basics of evidence-based medicine. Malden: BMJ Books; 2006.

Web sites:

1. Centers for Disease Control and Prevention (CDC)
   http://www.cdc.gov
2. University of Pretoria. School for Health Systems ad Public Health
   http://www.shsph.up.ac.za - click on Undergraduate programs
3. Center for Evidence-based Medicine
   http://www.cebm.utoronto.ca/intro/whatis.htm
4. Canada. Mc Master University. Evidence Based Medicine
   http://hiru.mcmaster.ca/
5. Supercourse: Epidemiology, the Internet and Public Health
   http://www.pitt.edu/~super1/
6. National Library of Medicine. Medline database
   http://www.ais.up.ac.za/health/eresourcesdb.htm Click on Medline
7. UNAIDS
   http://www.unaids.org
8. UNICEF
   www.unicef.org Read: State of the World's children 1997 at:
   http://www.unicef.org/sowc97/
9. World Health Organization (WHO)
   http://www.who.int/en/ Read: World Health Report 2000 at:
   http://www.who.int/whr/2000/en/index.html
10. WHO Statistical Information System
    http://www.who.int/whosis/en/
11. Evidence-based medicine (UP Health Sciences Libraries website)
    http://www.ais.up.ac.za/health/ebm.htm
12. International Agency for Research on Cancer
    http://www.iarc.fr

11. CASE STUDIES

11.1 SET no 1: Society's Health and Health Research

CASE STUDY 1: Prevention of Mother to Child Transmission of HIV (Research methods)

Read the article:

Geddes R, Knight S, Reid S, Giddy J, Esterhuizen T, Roberts C. Prevention of mother-to-child transmission of HIV programme: Low vertical transmission in Kwazulu-Natal, South Africa. S Afr Med J. 2008 Jun; 98(6):458-62.

(Article available on Click-up)

1. The authors state that this is a cohort study.

1.1 Graphically present the design of a cohort study. (6)

1.2 List 2 other important observational analytical study designs. (2)

1.3 Graphically present the design of a case control study. (6)

1.4 What is the most important difference between a cohort study and an experimental study? Use the study described in the article to illustrate this difference, in other words explain how the study could have been designed if the study was experimental. (4)

2. In the results section, the authors state that 89% of the pregnant women completed their antenatal care and 11% were lost to follow-up.

Why is it important to report the % lost to follow-up (LTFU) in cohort studies and how could a high percentage LTFU affect the results? (4)

3. The authors report that the mean gestational age of the study participants at first visit was 30 weeks (range 14-41). The median CD4 count was 293 (interquartile range 195-451).

3.1 Explain the difference between the mean and the median. Why do you think the mean was presented for the gestational age and the median for the CD4 count? (5)

3.2 Explain the terms "interquartile range" and "range". (4)

4. From table 1 explain the following results:

Prophylaxis in babies NVP vs. NVP and AZT:

4.1 Risk Ratio =5.25 (3)

4.2 p=0.033 (3)

4.3 95% CI 1.22-22.68 (3)

5. From other sources than this article, please find an answer to the following questions:

In the first paragraph of the main text, authors state that dual therapy for Prevention to Mother and Child transmission, is still not available in the public sector.

Is this statement still correct? Can you find the policy document referring to a change from mono-therapy to dual therapy in South Africa's public health sector? If so, give the title + webpage of this policy. (4)

6. The authors of the article state that HIV-infected women were counselled about infant feeding options. Briefly list the main risks and benefits of bottle feeding vs. mixed feeding vs. exclusive breastfeeding for children born to HIV positive women (from literature review other than the article presented to you). (10)

CASE STUDY 2: VIRAL HEPATITIS IN SOUTH AFRICAN HEALTH CARE WORKERS (Research methods)

Read through this article summary and systematically work through the answers below. Viral hepatitis in South African healthcare workers at increased risk of occupational exposure to blood-borne viruses. Journal of hospital infection.

Viral hepatitis in South African healthcare workers at increased risk of occupational exposure to blood-borne viruses.

Vardas E, **Ross MH**, **Sharp G**, **McAnerney J**, **Sim J**.

Department of Community Health, University of Witwatersrand, Johannesburg, South Africa. vardase@mweb.co.za

The prevalence of hepatitis A, B and C antibodies was measured in a group of healthcare workers (HCWs) at increased risk of occupational acquisition of blood-borne viruses (N=402) from a large, urban referral hospital in South Africa. The aims of this study were to determine the immunity of HCWs to these agents and to recommend policy for the protection of HCWs against occupational exposure to viral hepatitis in this country. Race, sex and age were shown to be important factors influencing the presence of hepatitis A (HAV) antibodies. Most black HCWs (96.2%) are protected from HAV infection. Females have significantly higher HAV antibodies compared with males and antibodies increase with increasing age. Hepatitis B antibodies (anti-HBs) were found in 30.6% of HCWs. Anti-HBs levels were significantly associated with a past history of HBV vaccination. However, only a small proportion of HCWs (21.2%) could remember ever being immunized against HBV. For those individuals that did receive HBV vaccination (N=83), the mean number of years since their last vaccine was 6.2 years (SD +/- 3.5). HCV antibodies were found in 1.8% of HCWs at increased risk of occupational exposure. It was not possible to define whether these infections were occupationally acquired but genotyping of the HCV (in two of seven cases) showed genotype 5, the predominant South African genotype. New recommendations for the prevention of viral hepatitis in HCWs in South Africa are made, including pre-employment screening for HAV

based on self-selection criteria, universal anti-HBs screening with HBV booster vaccination. HCV recommendations are based on appropriate education of HCWs about this infection and its prevention and a standardized post-exposure testing protocol. Copyright 2001 The Hospital Infection Society.

PMID: 11825045 [PubMed - indexed for MEDLINE]

Sentence 1: The prevalence of hepatitis A, B and C was measured in a group of healthcare workers (HCWs) at increased risk of occupational acquisition of blood-borne viruses (N=402) from a large, urban referral hospital in South Africa.

1) What is the difference between prevalence rate and incidence rate of a disease? (3)
2) What would be a more difficult study to do; a prevalence study on hepatitis A or an incidence study on hepatitis A? (2)
3) Which factors can influence the prevalence "rate" of a disease? (2)
4) What does it mean when we say "N=402"? (1)
5) Is it important information that "N=402"? (1)
6) How is risk expressed mathematically? Also explain the term in words. (2)

Sentence 2: The aims of this study were to determine the immunity of HCWs to these agents and to recommend a policy for the protection of HCWs against occupational exposure to viral hepatitis in this country.

7) Is this study as case-control study, an ecological study, a cohort study or a cross-sectional study? (2)
8) Can studies be used to recommend policies? (1)
9) Who would implement a policy of this nature? (2)

Sentence 3: Race, sex and age were shown to be important factors influencing the presence of Hepatitis A (HAV) antibodies.

10) Give another name used for the word "factors" when doing a study? (1)
11) Which type of variables are sex and race? (1)
12) Which type of variable is age? (1)
13) Is age measured or counted? (1)
14) Which type of variable is the presence or absence of HAV antibodies? (1)
15) Is this variable measured or counted? (2)

Sentence 4: Most black HCWs (96.2%) are protected from HAV infection.

16) 96.2 is a percentage; how does that differ from a proportion, rate or a ratio? (3)
17) Is HAV positive/ HAV negative a rate or a ratio? (1)
18) Is HAV positive/ HAV negative+positive (at a given time) a rate, ratio or proportion? (1)

Sentence 5: Females have a significantly higher HAV antibodies compared with males, and antibodies increase with age.

19) What does "significantly higher" mean in this context? (3)

20) Except for statistical significance, mention two other types of significance used in medicine? (2)

Sentence 6: Hepatitis B antibodies (anti-HBs) were found in 30.6% of HCW's.

21) Can these antibodies indicate whether these HCWs have been vaccinated with hepatitis B before? (1)

Sentence 8: However only a small proportion of HCWs (21.2%) could remember ever being immunized against HBV.

22) What is recall bias and can it play a role in this study? (2)

Sentence 9: For those individuals that did receive HBV vaccination (N=83), the mean number of year since their last vaccine was 6.2 years (+ -3.5).

23) What is the statistical term for the number in brackets"(+ - 3.5)" (1)

24) What is the difference between the mean, the mode and median? (3)

Sentence 10: HCV antibodies were found in 1.8% of HCWs at increased risk of occupational exposure.

25) Name and define three levels of prevention in terms of HCV and illustrate with examples. (6)

CASE STUDY 3: FETAL ALCOHOL SYNDROME (Causation)

Urban, M., Chersich, M.F., Fourie, L-A., Olivier, L., Viljoen,D. Fetal Alcohol Syndrome among Grade 1 schoolchildren in Northern Cape Province: Prevalence and risk factors. SAMJ 2008; 98: 877-882

Fetal alcohol syndrome among grade 1 schoolchildren in Northern Cape Province: prevalence and risk factors.

Urban M, **Chersich MF**, **Fourie LA**, **Chetty C**, **Olivier L**, **Viljoen D**.

Division of Human Genetics, University of Cape Town.

OBJECTIVE: To describe the prevalence, characteristics and risk factors for fetal alcohol syndrome (FAS) and partial FAS among schoolgoing children in Grade 1 in Northern Cape Province, South Africa. DESIGN: A cross-sectional study using a two-tiered method for ascertainment of FAS/partial FAS cases, comprising: screening of growth parameters, diagnostic assessment for screen-positive children using clinical and neurocognitive

assessments, and maternal history of drinking during pregnancy. Mothers or caregivers of FAS children and matched controls were interviewed. SETTING: Primary schools in De Aar (8) and Upington (15). Subjects. Grade 1 pupils in 2001 (De Aar, N=536) and 2002 (Upington, N=1299). OUTCOME MEASURES: FAS or partial FAS. RESULTS: The prevalence of FAS/partial FAS was high: 64/536 (119.4/1000, 95% CI 93.2-149.9) in De Aar, and 97/1299 (74.7/1 000, 95% CI 61.0-90.3) in Upington. Overall, 67.2 per 1000 children (95% CI 56.2-79.7) had full FAS features. Growth retardation was also common in this population: 66.6% (1181/1774) were underweight, 48.3% (858/1776) stunted, and 15.1% had a head circumference <2 SD for age. Mothers of children with FAS were less likely to have full-time employment or have attended secondary school and had lower body mass index, and about 80% currently smoked. Over two-thirds of all pregnancies had been unplanned. CONCLUSIONS: A very high proportion of pupils (nearly 1 in 10) had FAS/partial FAS, the rate in De Aar being the highest yet described in South Africa. FAS/partial FAS may contribute to the extremely high rate of growth retardation in South Africa as a whole and is a major cause of learning disability. These epidemiological features are important in designing preventive interventions.

PMID: 19177895 [PubMed - in process]

The questions that follow are to give an understanding of the causation in medicine and in no way reflects on the importance, the relevance or the methodology of this study. The examination of causation is to give a foundation so that students can understand the difficulties of proving causation in medicine.

Sentence 1: Objective. To describe the prevalence, characteristics and risk factors for fetal alcohol syndrome (FAS) and partial FAS among school going children in Grade 1 in Northern Cape Province, South Africa.

1. This is a cross-sectional study. Are cross-sectional studies suited to prove causation? (2)
2. Do you think that different studies have the same strength to prove causation? (4)
3. The best study to prove causation would be an experimental study. Why can we not do an experimental study? (2)

Sentence 2: Design. A cross-sectional study using a two-tiered method for ascertainment of FAS / partial FAS cases, comprising: Screening of growth parameters, diagnostic assessment for screen positive children using clinical and neurocognitive assessments and maternal history of drinking during pregnancy.

4. One way of determining causation is by showing proof of a dose-response relationship, that is proving that the more alcohol the mothers drink, the more their babies are growth retarded and have neuro-cognitive problems. Does this study strive to prove dose-response relationship? (2)
5. If you did strive to prove a dose-response relationship, what dose would you have measured and what response would you have measured? (2)

6. The study has strived to get an indication of exposure. What instrument has been used to measure exposure? (1)

7. If you want to prove causation beyond any doubt is an interview a good instrument? (1)

8. What is the one most crucial factor that is needed to prove causation? (2)

Sentence 8: Overall, 67.2 per 1000 children (95% CI 56.2 -79.7) had full FAS features.

9. If you wanted to prove causality, you would like to have many studies in different patient populations finding similar results. What do we call that? (1)

Sentence 10: Mothers of children with FAS were less likely to have full-time employment or to have attended secondary school and had lower body mass index, and about 80% currently smoked.

10. Why is this information important? How could it influence the presumed causal link between alcohol and neurocognitive development? (2)

Sentence 11: Over two-thirds of all pregnancies had been unplanned.

11. Do you think mothers whose pregnancies were unplanned, were more likely to have six year old children who had neurcognitive problems and growth retardation? (1)

12. What would you call the above in statistical terms if you wanted to prove causation? (1)

Sentence 12: Conclusions: A very high proportion of pupils (nearly 1 in 10) had FAS / partial FAS, the rate in De Aar being the highest yet described in South Africa.

13. Are there any other factors that are of importance in a tiny secluded town like De Aar that one would like to examine if you wanted to prove causality beyond doubt? (1)

Sentence 13: FAS / partial FAS may contribute to extremely high rate of growth retardation in South Africa as a whole and is a major cause of learning disability.

14. If you wanted to proof causation, you would not be able to prove reversibility in the case of FAS. Explain (1)

Sentence 14: These epidemiological features are important in designing preventative interventions.

15. What are the biggest limiting factors that prevent more causation studies being performed? (2)

16. Is it always possible to perform the perfect causality study ethically? (1)

Sentence 15: SAMJ 2008; 98: 877-882

17. What does SAMJ 2008; 98: 877-882 mean? (1)

CASE STUDY 4: TUBERCULOUS PERICARDITIS (Epidemiological Triangle)

Mayosi,B., Wiysonge,CS., Ntsekhe,M., Gumedze,F., Volmink,JA., Maartens,G., Aje, A., Thomas,KM., Awotedu,AA., Thembela,B., Mntla,P., Maritz,F., Blackett,KN., Nkouonlack,DC., Burch,VC.,Rebe,K., Parrish,A., Silwa,K., Vezi,BZ., Alam, N., Brown,BG., Gould,T., Visser,T., Magula,NP., Commerford, PJ. Mortality in patients treated for tuberculous pericarditis in sub-Saharan Africa. SAMJ 2008; 98: 36-40

OBJECTIVE: To determine the mortality rate and its predictors in patients with a presumptive diagnosis of tuberculous pericarditis in sub-Saharan Africa. DESIGN: Between 1 March 2004 and 31 October

2004, we enrolled 185 consecutive patients with presumed tuberculous pericarditis from 15 referral hospitals in Cameroon, Nigeria and South Africa, and observed them during the 6-month course of antituberculosis treatment for the major outcome of mortality. This was an observational study, with the diagnosis and management of each patient left at the discretion of the attending physician. Using Cox regression, we have assessed the effect of clinical and therapeutic characteristics (recorded at baseline) on mortality during follow-up. RESULTS: We obtained the vital status of 174 (94%) patients (median age 33; range 14 - 87 years). The overall mortality rate was 26%. Mortality was higher in patients who had clinical features of HIV infection than in those who did not (40% v. 17%, p=0.001). Independent predictors of death during follow-up were: (i) a proven non-tuberculosis final diagnosis (hazard ratio (HR) 5.35, 95% confidence interval (CI) 1.76 - 16.25), (ii) the presence of clinical signs of HIV infection (HR 2.28, CI 1.14 - 4.56), (iii) coexistent pulmonary tuberculosis (HR 2.33, CI 1.20 - 4.54), and (iv) older age (HR 1.02, CI 1.01 - 1.05). There was also a trend towards an increase in death rate in patients with haemodynamic instability (HR 1.80, CI 0.90 - 3.58) and a decrease in those who underwent pericardiocentesis (HR 0.34, CI 0.10 - 1.19). CONCLUSION: A presumptive diagnosis of tuberculous pericarditis is associated with a high mortality in sub-Saharan Africa. Attention to rapid aetiological diagnosis of pericardial effusion and treatment of concomitant HIV infection may reduce the high mortality associated with the disease.

The questions that follow are to give an understanding of the infectious disease processes in medicine and epidemiological concepts in medicine and in no way reflects on the importance, the relevance or the methodology of this study. This study is for the students to place terminology used in epidemiology within the context of article reading.

Sentence 1: Objective: To determine the mortality rate and its predictors in patients with a presumptive diagnosis of tuberculous pericarditis in sub-Saharan Africa

1) Apply the elements of the epidemiological triangle to tuberculosis in general (not only tuberculous pericarditis). (7)

2) Use the same elements of the epidemiological triangle to design effective control measures for tuberculosis. (7)

3) How does the tuberculosis bacillus enter the pericardium? (2)

Sentence 2: Design. Between 1 March 2004 and 31 October 2004, we enrolled 185 consecutive patients with presumed pericarditis from 15 referral hospitals in Cameroon, Nigeria and South Africa, and observed them during a six-month course of antituberculous treatment for the major outcome of mortality.

4) If you know that disease processes can be modified by breaking any of these foundations of the epidemiological triangle, that is modifying the agent, the host or the environment; what does sentence 2 represent? (1)

5) Why does the patient need to be on 6 months of treatment with antituberculous drugs? (1)

Sentence 3: This was an observational study, with the diagnosis and management of each patient left to the discretion of the attending physician.

6) Can a patient have subclinical tuberculous infection? Explain briefly. (3)

Sentence 5: Results. We obtained the vital status of 174 (94%) patients (median age 33; range 14-87 years).

7) What is the definition of a median age of 33 years? (2)

Sentence 6: The overall morality rate was 26%.

8) Can tuberculosis and tuberculous pericarditis easily be eradicated? (2)

9) Can herd immunity be gained by vaccinating babies with BCG? Does BCG immunization prevent pulmonary TB in adults? (2)

Sentence 7: Mortality was higher in patients who had clinical features of HIV infection than those who did not (40% vs 17%, p=0.001)

10) What does the p-value of 0.001mean? (1)

Sentence 8: Independent predictors of death during follow-up were (i) a proven non-tuberculous final diagnosis (hazard ratio (HR) 5.35, 95% confidence interval (CI) 1.76 – 16.25) (ii) a proven non-tuberculous final diagnosis (HR 2.33, CI 1.14 – 4.56) (iii) coexistent pulmonary tuberculosis (HR 2.33, CI 1.20 – 4.54) and (iv) older age (HR 1.02, CI 1.01 – 1.05)

11) With a hazard ratio (a type of relative risk) of 1.02 do you think that old age is an important risk factor for death due to tuberculous pericarditis? Explain. (2)

12) How does a proven non-tuberculous final diagnosis affect the risk (hazard) of dying? (2)

Sentence 9: There was also a trend towards an increase in death rate in patients with haemodynamic instability (HR 1.80, CI 0.90 – 3.58) and a decrease in those who underwent pericardiocentesis (HR 0.34, CI 0.10 – 1.19).

13) What does the word pericardiocentesis mean? (1)

14) Does the statement on pericardiocentesis; with a confidence interval for the HR stretching from 0.10 to 1.19, have statistical significance? Explain. (2)

Sentence 11: Attention to rapid aetiological diagnosis of pericardial effusion and concomitant HIV infection may reduce the high mortality associated with the disease.

15) What is the etiologic agent, reservoir, portal of exit, transmission route, the portal of entry and susceptible host in pulmonary tuberculosis? (6)

Sentence 12: SAMJ 2008; 98: 36-40

16) What does SAMJ 2008; 98: 36-40 mean? (1)

CASE STUDY 5: SCREENING

Tuberculosis is the leading cause of death in patients with HIV and one of the most pressing public health problems in South Africa. Diagnosing tuberculosis can be challenging for a variety of reasons.

In the table below hypothetical data of the results of sputum examination in patients with and without pulmonary tuberculosis (as confirmed by gold standard tests assessed by tuberculosis experts) are presented:

	Pulmonary Tuberculosis	No pulmonary tuberculosis	Total
Sputum test negative	900	196020	
Sputum test positive	1100	1980	
Total			

1. Complete the missing values in the table. What is the prevalence of tuberculosis in the population studied? (4)
2. From the Global Tuberculosis Control World Health Organization Report 2008 (which you should be able to find on the web), what was the estimated incidence of tuberculosis (all cases) in South Africa for 2006? (2)
3. Calculate the sensitivity of sputum microscopy (from the table above) and explain in words what this means. (4)
4. The sensitivity of sputum microscopy is quite low. Despite this, sputum microscopy is still the WHO recommended mainstay of diagnosis for pulmonary tuberculosis. From literature review, argue why this is the case. (3)
5. From literature review, explain which other tests are commonly used in developing countries to strengthen the diagnosis of pulmonary tuberculosis. What are the advantages and disadvantages of these additional tests? (8)
6. Calculate the specificity of the test and explain in word what it means.
Are you satisfied with the specificity of the test? (4)
7. The following table shows the results for a subgroup of the population, namely patients with suspected tuberculosis (cough for more than 2 weeks, weight loss, night sweats).

	Pulmonary Tuberculosis	No pulmonary tuberculosis
Sputum test negative	900	1980
Sputum test positive	1100	20

7.1 If the patient has a positive sputum test, what is the probability that this patient truly has PTB? What is the scientific name for this "probability"? (3)
7.2 If a patient has a negative sputum test, what are the chances that this patient is truly TB free in this hypothetical population? What is the scientific name for this "probability"? (3)
8. List at least 4 common medical risk factors for the development of tuberculosis disease. (4)

11.2 SET no 2: Ethics, Personal Life, Adverse Life Events, & Doctor-Patient Relationship

CASE STUDY no 1 (Real-Life Clinic Study)

Find a family with teenagers at the clinic to which your group was allocated. Ask their permission to talk to them, after explaining to them that you want to understand their family situation better for the purposes of your learning. Answer the questions based on the family you choose:

1. Describe the family in detail. Asks specifically about medical disease and other problems. Use only abbreviations of their names for confidentiality purposes.
2. Draw the genogram of this family. (10)
3. In which stage of the family life cycle is this family at the moment, and what are the challenges they face at this stage (use their actual real life challenges)? (5)
4. Why is the care of the teenagers in this household so important for health purposes? (5)
5. How would you approach a consultation with these teenagers? How did you practically do this? (10)
6. Describe a model to use for writing your notes from a consultation and how you would apply it to this family. (10)
7. What is extent/scope, depth and actual knowledge of the teenagers in this family regarding sex, pregnancy, contraception, STI's (including HIV) and prevention thereof? (10)
8. How can you / did you improve their knowledge/ counsel them on safe sexual practices? Give a justification for your approach. (10)
9. How can you help this family to deal with conflict between parents and teenagers? (5)
10. How would / did those of you in the group who are from a different culture than this family, deal with the cultural differences? (5)
11. a) Identify the legitimate values of the family, the members of the family and health personnel that are relevant in the further health care delivery to this family. (10)
    b) Identify potential conflicts between these values and describe the process that you will follow in dealing with these conflicts according to Values-Based Practice. (15)

CASE STUDY no 2 (Real-Life Clinic Study)

Find a patient with a chronic disease at the clinic to which your group was allocated. Ask him/her permission to talk to him/her, after explaining to him/her that you want to understand his/her family situation better for the purposes of your learning. Answer the questions based on the family you choose:

1. Tell us more about your patient. Write down the 3 stage assessment for this patient (bio-psycho-social model). (6)
2. Describe a consultation framework you can use to deal with a patient with a chronic disease and describe how you would apply this framework to your patient's situation. (10)
3. Explain the 4C's of chronic disease management, using your patient as an example. (8)
4. What does it mean to be patient centred? How did you practically do this (give practical examples) when you talked to your patient? (6)
5. What is the role of a family in dealing with a chronic disease? (5)
6. What role does the family of your patient play in his/her disease? How can you help this family to cope better with this chronic disease? (5)
7. What does it mean to negotiate a management plan with a patient? Describe how that may be applied to your patient's situation. (7)
8. Identify one behaviour in the life of your patient that s/he thinks should change. How can you help your patient to change this behaviour? (10)
9. Explain, using your patient as an example, the difference between illness and disease. (5)
10. Describe the requirements for informed consent **in their <u>application</u>** to your patient and his/her family. (10)
11. Describe potential and actual ethical issues or challenges **<u>as relevant to your patient</u>** regarding:
    a) Confidentiality; (5)
    b) non-malificence; (5)
    c) beneficence; (5)
    d) distributive justice; (5)
    e) deception; (5)
    f) professional-ethical conduct. (8)

CASE STUDY no 3

Miss Precious Pelo is 65 years of age. She lives with her sister Mary (age 70) who is also a spinster as well with her nephew (son of her deceased brother) Joseph (age 45), his wife Dorothy (age 37) and their 4 children (age 14, 13, 10, 4 respectively). Joseph and Dorothy are working full time and Precious looks after the children during day time and loves cooking, baking and the pleasures of sweet fruits especially mango's, peaches, apricots, grapes, figs, and oranges. She is very motherly and the children adore her, no less for her creative cooking and baking skills.

Mary is active almost every day in local church activities or charity work in the community. Mary is well-educated and does not believe in the use of ordinary medicine. She believes in "natural" products, vegetables, fruits, and altruism. She weighs 50kg and is 1.60m tall. She encourages her sister to eat fruits and vegetables for the sake of Precious' health and is concerned that Precious would become mentally dependent on the medication that her sister receives from the doctor at the local hospital.

Precious suffers from hypertension, diabetes mellitus and suffered one previous transient cerebral ischemic incident 5 years ago. She weighs 128kg and is 1.65m tall. She receives oral treatment for her diabetes and hypertension. She uses nasal tobacco ("snuff") at least hourly. Precious attends routinely at the local hospital and is often hospitalized for poor control of her diabetes and hypertension. The attending physician is frustrated with Precious. All the physician's attempts to reduce Precious' weight and get her to adhere to the prescribed medication and dietary measures seem in vain, yet she attends at the out-patient clinic like clock work, expecting the best medical care available. The attending physician has been thinking at times of telling her that she should either adhere to the medical prescriptions or not come back to the out-patient clinic.

Dorothy and Joseph are very upset with Precious for not taking her medication regularly, not loosing weight, eating fruits and sweets as if oblivious to her suffering from diabetes, and her "disgusting" tobacco habit.

The 10 year old boy suffers from "knock knees" owing to a partial collapse of his tibial epiphyses, owing to his weight of 110kg (1.4m tall), which if not arrested would lead to his becoming wheelchair bound. The paediatrician at the local hospital had admitted the 10 year old boy to the hospital with the view to subject him to a stringent diet. After 2 weeks no progress was made and it transpired that Mary had secretly brought him plenty of fruits and Precious had secretly brought him Coke, sweets and biscuits. The boy has been feeling miserable all the time whilst in hospital, and has been longing, tearfully at times, for the love of his aunt (Precious).

Task:

Describe extensively how Values-Based Practice (VBP) **may be applied** in the above situation by you as the attending physician (assuming you are already qualified) as well as by the paediatrician. Make reference to all the potential role players, the 10 pointers of VBP, and both the overt and the tacit but important aspects in the further health care of Precious and the boy. (30)

CASE STUDY no 4

Consider the following questions extensively regarding ethics in health practice **and use fictive examples** to demonstrate your understanding of the relevant concepts:

a) Describe the strengths and limitations of various approaches to health ethics. (20)

b) List various purposes of health ethics of health care and give various reasons why we need health ethics. (10)

c) Describe what each of "the 4 principles" of bio-ethics entail. (16)

d) On which principle of bio-ethics is the need for informed consent based? (2)

e) Describe what does informed consent entail and what are the requirements for informed consent to be valid? (20)

f) Describe when is informed consent required and when not? (10)

g) Describe recourses of action that are ethically acceptable when someone is incapable of giving informed consent to a health intervention. (5)

h) Discuss about which (kind of) information should confidentiality be maintained in health practice, and in which (kind of) cases should or must it not be maintained. (10)

i) Describe various kinds of deception and provide examples of those in health practice. (10)

j) Argue for AND against the need for a professional oath or a professional declaration. (15)

k) If a professional declaration is an imperative, provide a justification for the respective aspects that you reckon should be covered in the declaration. (20)

CASE STUDY no 5

You are a general practitioner in Vaalwater and Mrs. Shabangu consults you about her baby girl, Lucky, now 5 years old. She is the 5th child and was born at home because her mother didn't have transport to go to the local clinic. She did not cry immediately after birth and when her mom eventually arrived at the clinic she was told that she might not life. She survived but showed severe developmental delay and at present can't walk on her own and can only say a few words. She is well cared after but her mom admits that up till now it was very tough to look after her and she want to look at alternatives i.e. to place her in a care home or to send her to school. She is not getting any financial support from Lucky's father and receives support from her mother who is working as a domestic worker. She is unaware of the fact that she can apply for financial support from the government.

You make the diagnosis of cerebral palsy and decide that you want to try your best to help this poor lady.

1. Discuss the concept of community-based rehabilitation as relevant to this case. (10)
2. List the rehabilitation services that you can make use of. (5)
3. What are the legal systems in South Africa that would protect the rights of this child? (10)
4. Discuss Social Assistance in South Africa. (5)

CASE STUDY no 6

Discuss the following about people including patients and physicians:

1. About which areas of a patient's life should the physician enquire about the consequences of ill health in order to understand the patient's position best? (10)
2. Discuss the importance of the patient's relationships in the practice of the general practitioner. (8)

3. Discuss the importance of sexual matters in the practice of general practitioners. (6)
4. Explain and provide examples that demonstrate the differences between sexual orientation, gender role identity, and sexual identity. (7)
5. How would you deal with a patient with whom you have made a professional mistake? (5)
6. Why would you dislike a patient? What are the results of disliking a patient and how should you manage it? (8)
7. How would you deal with a patient whom you have examined thoroughly, done all the appropriate special investigations (blood tests etc) and you still do not know what is wrong or what treatment of offer for his illness? (5)
8. Describe how you would deal with a seductive patient whom you like. (5)
9. Describe how you would deal with a seductive patient whom you dislike. (5)
10. Describe the desirable attitude of a physician when confronted with:
    a. an aggressive patient (5)
    b. an obnoxious patient (5)
    c. a suicidal patient (5)
    d. a patient who says he or she is unhappy about you/your diagnosis/your treatment (5)
    e. a patient from another cultural and religious background than yours (5)
    f. an elderly patient (5)
11. Describe factors you should take into account in deciding on how comprehensive you should take the history of the patient. (8)

CASE STUDY no 7

A 47 year old woman is brought in by her daughter who is a first year student. The family started experiencing difficulties after the sudden death of her husband in a motor vehicle accident 18 months before. The mother seems anxious in the waiting room and is visibly irritated with her daughter. She feels she is on the verge of a nervous breakdown and requests medication to help her cope. Although she seems lost without her husband she doesn't admit to this. It is clear that her husband took care of the family's finances and most other things in the household. She feels she is a burden to her daughter who now needs to drive her around as she does not have a driver's license because she relied on her husband to take her everywhere. She complains of sleeplessness, a burning sensation in her stomach and lower back pain. Her daughter is concerned because she walked in on her mother at 11 am whilst she was drinking a glass of wine. Her mother seemed unsteady on her feet and her speech was slurred. This was not the first time that she has seen her mother in this state during the past month. She also stated that her mother is drinking a host of different pills for all sorts of physical complaints she has. The mother denies these claims as she is used to having a glass of wine every now and then. She says the only things she currently uses are sleeping tablets at night because she cannot sleep due to worry and several pain killers everyday due to her lower back pain. The mother stated that her daughter is very unsupportive. She says that her daughter is also depressed and talks about killing herself, struggles with her studies and that she constantly talks about her father and had started wearing her father's clothing. She has also mentioned to her mother that she sometimes hears her

father talking to her just before she falls asleep. Your impression is that both mother and daughter have developed a style of not addressing stressful situations directly and you suspect that this played a big role in their current conditions.

Questions:

1. Name and describe the dominant coping style of mother and daughter. (2)
2. Which other style of coping would be more effective in this situation. Motivate. (5)
3. If you have identified their coping style, how would you address this? (4)
4. What stage of bereavement does the behaviour of the daughter resemble? Motivate. (5)
5. Is this still normal grief or has it developed to complicated grief? Motivate your answer. (10)
6. If you decide that this is complicated grief, what will your intervention as a doctor entail? (5)
7. Do you think the mother has a substance abuse problem? Motivate. (5)
8. How would you manage a substance abuse problem in a general practitioner? (5)
9. Differentiate between substance abuse and substance dependence? (5)
10. Apply the concept of triangles as discussed in family systems theory to this case study. (5)

CASE STUDY no 8

You are the community service doctor at the district hospital in Queenstown. Suzi, your 18 year old patient, gave birth to a Down's syndrome baby girl. Suzi is a well-known patient at the district hospital, as she has a long history of "rage fits", as her mother calls it, as well as severe self mutilation and suicide attempts. Her suicide attempts included taking all her medication, wanting to jump from a building and severe slashing of the wrists. She has been diagnosed amongst others with bipolar mood disorder, but does not take her medication as prescribed. She also has a history of drug and alcohol abuse and smokes about 40 cigarettes a day, also while being pregnant. Her family is not supportive of her, as they have many problems of their own. Her father abuses alcohol and becomes verbally and physically aggressive towards her mother, herself and her two brothers. Her mother was diagnosed with multiple sclerosis two years ago, and being unable to work, stays at home. Neither her two brothers work and both served jail time for selling drugs. The father of her baby left her when he had found out about the pregnancy. Suzi has not yet seen her baby. You have to break the news to her about her Down's syndrome baby. You fear what her reaction might be, considering her psychiatric history, especially her previous suicide attempts.

1. Explain how you will break the bad news about Suzi's Down's syndrome baby to her by using the principles of giving bad news and explaining the six-step protocol of breaking bad news. (10)
2. Discuss some of the reactions you could expect from her. (5)
3. With regards to patients' reactions to bad news, please comment on the following statement: "When students or doctors succumb to the temptation to respond as *personal selves*, they compromise their ability to act as *medical selves*." (5)
4. Discuss why conveying bad news is experienced as "bad" by doctors. (5)

5. With regards to Suzi's previous suicide attempts, differentiate between suicide and para suicide. (4)
6. Identify the risk factors in suicide. (10)
7. Discuss the myths surrounding suicide. (10)
8. List and discuss the clues to help you identify suicidal ideation/behaviour. (5)
9. Describe the important aspects of a suicide assessment interview. (5)
10. Discuss crisis intervention strategies that apply when dealing with a suicidal patient like Suzi, with specific reference to the six-step model of crisis intervention. (6)

CASE STUDY no 9

Mike is a 6th year medical student working at the trauma and casualties unit at a provincial hospital. One evening whilst on duty a patient is brought into the casualties unit with severe injuries sustained in a motor vehicle accident. The paramedics who brought the patient in reported that he was a medical student as they found his student card on him. Mike suddenly recognized the patient's name and realized that it was one of his class mates. Mike decided to visit his classmate and was shocked at the extent of his injuries. His classmate's face was not recognizable due the injuries he sustained. Mike suddenly felt overwhelmed by the thought of his classmate being so critically injured. He found it difficult to concentrate on his duties for the rest of the evening. That night at home Mike struggled to fall asleep and found himself thinking about his classmate throughout the night. The next morning Mike woke up tired and stressed. For the next couple of days Mike had an irritable mood and found himself to be short tempered. In the evenings he struggled to sleep and he had a nightmare of him being in a motor vehicle accident. At times he thought back of a motor vehicle accident in which he had been involved. At that time he had been hospitalized for two weeks after this incident since he had sustained a broken leg, fractured ribs and a concussion.

Mike did tell his parents about his classmate being critically injured, but he found it difficult to talk about this experience. In the following weeks Mike continued to have difficulty sleeping and this was affecting his work at the hospital. Mike dreaded each day he walked into the casualties ward as he was becoming increasingly more anxious of the thought of having to see and treat patient in the ward that he knows personally.

Questions

1. How would you determine whether Mike was traumatized in his experience? (5)
2. What are effective ways in which Mike can deal with his experience? (5)
3. How is trauma treated? (5)

12. WORKSHOPS ON VALUES

A) The appetiser: Importance and divergence of values in a personal medical case

You suffer from a terminal medical condition, called "X"
You could opt for an operation now with a
50 % chance: full recovery
50 % chance: DEATH on the operating table
OR
You could let pass the LAST chance of recovery (thus not having surgery)
For how long a period need the prospects (no guarantees) of survival be, for you to let this last chance pass (i.e. not having surgery)

B) The values awareness workshop

Students are to tackle these questions after the lecturer has made it clear that there are not necessarily right/wrong answers to these questions, but that the questions serve to take them through a process aimed at their becoming more aware of values..

B1) Raising awareness

B1.1) What do we mean by the term values?
B1.2) Where are values most evident in medical practice?
B1.3) What are the values underpinning medical practice and policies?

B2) Impact of consensus and diversity of values in medical practice

B2.1) Without conferring, list three words that describe a GOOD apple.
B2.2) Without conferring, list three words that describe a GOOD doctor.
B2.3) Compare the two lists.
B2.4) What significance do these lists have for medical practice? Consider diversity, consensus, difficulties, risks, expectations, consistency of professional practice, (in)tolerance for differences, ignorance, respect, etc.

B3) Uncovering hidden values

B3.1) Identify (and mark the works indicative of) values in the given text about a doctor-patient contact.
B3.2) Identify whose value each of the expressed values is.
B2.3) What are the practical implications of being aware of these values?

C) The working with values workshop (case study)

C) Consider the following events as related by a senior medical student:
In an acute medical ward an HIV-infected man was dying from septic shock. The question of withdrawing life-support was raised. The attending physician was a very taciturn man who seldom engaged in team discussions. On this occasion he had waited until lunchtime when the nurses and interns were away and he then withdrew life support. Then he left… When we returned the patient was dead. At that moment, the patient's family arrived and the rest of us… had to cope with a very bad situation. The attending physician believed that doctors must be able to make life and death decisions. He was convinced that he acted in the patient's best interest. I talked to the head of the department about what had happened but he shrugged off any need for further discussion.

C1) What is the main decision in question?
C2) Which values are conveyed in this story? Consider the values of all the role players.
C3) Which values not related in this story might have had crucial bearing on the course that events took?
C4) Could the main decision (see question C1)) have been made on the facts only? Give reasons for your answer.
C5) Whose values are (most) important in this decision?
C6) What should the role of lawyers and clinical ethicists be in making this decision?
C7) What might the impact be on various sets of values of the stakeholders if a novel treatment (called HIV-OUT), a very expensive product of high-tech science, had become an option, which would give him a 50% chance of survival but with the unavoidable adverse effect of reducing his intellectual ability with 20%.
C8.1) If an otherwise healthy person suddenly develops severe angina of a heart attack, what are the implicit values that would suggest emergency actions.
C8.2) Would these values be noticed ordinarily (in the heart attack case)?
C8.3) What about the values of the former case (HIV-infected man) make them so noticeable? Your answers to questions B2.3) and B2.4) may be helpful here.
C9) Suggest ways of dealing responsibly with the diverse values in this case.

DECLARATION – CASE STUDIES OF BLOCK 2 – 2009

I,……..(name), student number……hereby

declare that

1. I understand what plagiarism entails and am aware of the University's policy in this regard.
2. I declare that this is my own original work on case studies. Where someone else's work was used (whether from a printed source, the internet or any other source) due acknowledgement was given and proper references were made.
3. I did not make use of another student's previous work and submitted it as my own.
4. I did not allow and will not allow anybody to copy my work with the intention of presenting it as his or her own work.
5. I declare that I have worked on each individual question myself.
6. I declare that I discussed and appropriately amended the answers to all the case studies in a group context.
7. I declare that I have used various literature sources in doing the case studies.
8. The student(s) with whom I worked in a group on my case studies was/were……stud no……
   ……stud no……
   ……..……stud no……
9. Provide a percentage mark to yourself and each of the students in your group by considering your individual qualitative an quantitative contributions to the case studies

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10. The value of discussing with fellow students my answers to the case studies was

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SIGNATURE:…….. DATE…….