STUDENT WORKBOOK

4th Year Medicine

Department of Medicine
Faculty of Medicine
Sabaragamuwa University of Sri Lanka

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CONTENTS

PREFACE

We have developed this workbook for students who have completed the basic levels of clinical training. It is a guide to those who commence the more advanced levels of learning in the hospitals and clinics. In the Faculty of Medicine, Sabaragamuwa University of Sri Lanka (SUSL), this corresponds to students doing their 4th Year Medicine Appointments after completing their 3rd Year Medicine Appointment and Short Appointments.

This Workbook is a joint effort by the Consultants of the Rathnapura Teaching Hospital of and the academic staff of the Department. We value your feedback to improve the Workbook.

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CHAPTER 1

INTRODUCTION

The clinical teaching in Medicine in SUSL consists of 3rd year Medicine Appointment, short appointments in subspecialties, 4th year Medicine Appointment, and the Professorial Appointment. During the 3rd year Appointment students are expected to learn basic concepts of history taking, examination, investigations and management. More emphasis was given to history taking and examination during this period. Your short appointments will give you opportunities to learn more details and finer understanding of diseases and illnesses from a range of patients. We have developed workbooks for these finer specialties to help you cover the core subject topics in a systematic way. However, it is essential to emphasize that your learning is not limited only to the areas covered in these workbooks or the course objectives laid out. You must also learn from the rich range of encounters you will have with your patients and from the teaching done by the clinical teachers.

The Fourth Year Workbook gives a more advanced approach to your patient and aims to develop a student with an ability to evaluate a patient more comprehensively and formulate an investigation and management plan. In addition, some specific areas are also introduced to you during this appointment such as medical ethics, home visit and writing reflective logs. We hope you will make maximum use of this workbook to enhance your fourth-year training.

Following are the learning outcomes of the 4th year Medicine Appointment.

1. Explain the pathophysiological basis of the common diseases and their investigation and management process.

2. Interview and obtain a comprehensive and accurate history.

3. Perform a relevant physical examination and elicit physical signs.

4. Analyze the clinical information and arrive at a reasonable clinical differential diagnosis.

5. Plan appropriate investigations to arrive at a clinical diagnosis, while considering their utility, efficacy and costs.

6. Describe with reasons the management carried out on patients and be able to develop individualized care plans.

7. Understand the impact of socio-cultural factors on the illness and the effect of the illness on the patient and family and appreciate relevant ethical issues.

8. Demonstrate empathy, maintain ethical standards, and be kind to your patients and others.

9. Communicate well with patients from different social and cultural backgrounds and with their families with particular reference to giving information, obtaining consent and breaking serious news.

10. Write case notes, daily status, referrals, discharge summaries, notification procedures, clinic notes and prescriptions.

11. Work as a member of a health care team caring for patients while understanding the limitations as a medical student.

12. Know the support provided by the health system, the social service sector and informal carers towards provision of care for patients in hospital and in the community.

Lecture topics

Cardiovascular System

1. ~~1.~~ Cardiac arrest and CPR – Workshop
2. Valvular heart disease and rheumatic fever
3. Infective endocarditis
4. Pericardial disease, cardiomyopathies and cardiac tumors
5. Pulmonary hypertensions, Pulmonary embolism and Deep Vein Thrombosis
6. Ethical issues related to resuscitation (DN-CPR, CPR)

Respiratory System

7. Tuberculosis
8. Bronchiectasis
9. Obstructive sleep apnea
10. Chronic lung infections and suppurative lung disease
11. Interstitial lung disease (ILD)
12. Acute lung injury (ALI) and Acute Respiratory Distress Syndrome (ARDS)
13. Pleural disease, pneumothorax, pleural effusion and neoplasms
14. Ethical issues related to ventilation (Removal of ventilatory support; when to commence ventilation in a person having respiratory failure; prioritization to provide ventilatory care)

Nephrology

15. Renal replacement therapy (dialysis and transplantation)
16. Ethical issues related to renal transplantation (donor selection, consent etc.)

Gastrointestinal System

17. Upper GI bleeding and melaena
18. Inflammatory bowel disease
19. Malabsorption, GI causes of Anaemia
20. Pancreatitis
21. Futility and palliative care in hepato-biliary and pancreatic disease

Endocrinology and metabolism

22. Disorders of hypothalamus and pituitary
23. Water and electrolytes disorders (potassium, sodium and calcium)
24. Adrenal disorders and Cushing's syndrome
25. Acromegaly/PCOS
26. Radiological investigations of endocrine disorders

Nervous system

27. Movement disorders and Parkinson' disease
28. Muscle and neuromuscular junction disorders and myopathies
29. Neuropathies (cranial/ peripheral/ autonomic/ focal)
30. Cognitive decline /Memory disorders and Dementia

31. Gait disorders and Cerebellar syndrome
32. Motor neuron disease, disorders of NMJ and myopathies
33. Multiple sclerosis and other demyelinating disorders
34. Higher cerebral function and speech disorders
35. Ethical issues related to brain death

Hematology and Immunology

36. Bleeding and coagulation disorders
37. Thrombophilic disorders and anticoagulation
38. Principles of immunology/Immune manipulation

Musculo-skeletal

39. Vasculitis
40. Spondyloarthritis and crystal arthritis
41. Myositis (Inflammatory) / Connective tissue disorders (Marfan's/EDS/ Hypermobility etc.)
42. Metabolic bone diseases

Infections and parasitic diseases

43. HIV and AIDS/ Common STDs

Dermatology

44. Urticaria, eczema and pruritus
45. Populous squamous disease /Psoriasis
46. Therapeutics in dermatology and drug reactions / Toxic Epidermal Necrolysis (TEN), Stevens Johnson syndrome
47. Infections of the skin /Leprosy
48. Dermatological manifestation of systemic disease

Geriatrics

49. Infections in the elderly
50. Frailty /Falls

Palliative care

51. Management of terminally ill patient
52. Ethical issues in Palliative care and elderly

Nutrition, growth and development

53. Undernutrition and overnutrition in adults

Supportive care for medical patients

54. Supportive care for medical patients

Toxicology and toxinology

55. Insect bites
56. Plant poisons
57. Tobacco, alcohol and substance abuse

Other

58. Evidence-based medicine and importance of research and publications
59. Emerging issues of interest (e.g., COVID pandemic, climate change & health)

CHAPTER 2

WARD WORK

You need to maintain records on your ward work including attendance, the patient care, casualty days, clinic participation and the ward teaching that you have participated.

*you may use a different table with more space using the following format

Date	Attendance of including casualty nights and ETU visits as separate entries	BHT no of patients you encounter	Procedures performed or observed	Teaching activity	Remarks including casualty day notes (mention the number of admissions any important incidence etc)

CHAPTER 3

PROCEDURES

Complete the following table based on the procedures you have performed. You are expected to perform basic procedures like IV cannulation, setting up of a fluid drip, IM injection, IV injection, setting up of a blood transfusion (under supervision), male catheterization, setting up of oxygen via mask/ nasal cannula, check capillary blood sugar, check urine dipstick, phlebotomy, ECG tracing, NG tube placement and checking, and etc)

Procedure	Date	BHT	Supervisor	Signature

Complete the following table based on the procedures you have observed. You are expected to observe procedures like, lumbar puncture and CSF manometry, ET intubation, death confirmation, peritoneal paracentesis, central line insertion, setting up NIV, etc

Procedure	Date	BHT	Supervisor	Signature

CHAPTER 4

CASE-BASED DISCUSSIONS

Instructions

In this section you are requested to complete a minimum of 15 case discussions. The idea is to cover the essential topics that you should encounter before you enter the final year professorial appointment.

You may complete a minimum of 15 case histories including the following sections in each case: history, examination, summary, problem list, diagnosis or differential diagnosis, investigations, management and discussion.

History should be comprehensive, and the examination should be completed with more emphasis on the relevant system(s) for that particular case. Problem identification is a valuable skill that you need to learn when treating patients. List down the problems that you have identified, which is more suitable if you divide them into categories such as, acute and chronic or medical and surgical or medical and psycho-social. Summary writing needs lots of practice, and its quality improves as you go along the training. It should include the important information gathered in history and positive and important negative signs elicited at the examination. Investigations are those you have observed in the ward or those planned to do. However, you should know the essential investigations related to the case scenario even if they were not done in the ward. Management also included as they were done in the ward, to learn the practicality. However, it is essential for you to know recommended, widely accepted management if it differs from what is practically done in the ward. Discussion area is not included in the conventional history of a patient. However, this section has included to enhance the student to think and improve their knowledge in the areas relevant for the particular case they have encountered.

You should try to complete the cases that are normally encountered in wards and those related to the topics taught in medicine. You may add extra pages as required to the workbook to complete this section. A list of laboratory investigations with their reference ranges and units are given for your convenience.

Following is a list of lab investigations with their reference ranges and units

Lab Investigation	Units	Refence range
Complete blood count (full blood count - FBC)	-	-
Hb	g/dL	Male 12 - 14
Hematocrit (Pack cell volume)	%	Female 11 – 13
	-	Male 42 - 52
Platelets	μL^{-1}	Female 37 – 47
White cells	μL^{-1}	150 – 450 x 10^3
Neutrophils	μL^{-1}	2500-7500
Lymphocytes	μL^{-1}	1500-3500
Monocytes	μL^{-1}	200-800
Eosinophils	μL^{-1}	40-440
Basophils	μL^{-1}	10-100
MCV	μm^3 (fL)	80-95
MCH	pg	27-34
MCHC	g/dL	20-35
Serum creatinine (S.Cr)	mg/dL	0.9-1.2
Serum electrolytes (SE)		
Sodium (Na)	mEq/L	135-145
Potassium (K)	mEq/L	3.5-5.2
Chloride (Cl)	mEq/L	98-106
AST (Aspartate transaminase)	U/L	10-40
ALT (Alanine transaminase)	U/L	10-40
ALP (Alkaline phosphatase)	U/L	30-120
GGT (Gama-glutamyltransferase)	U/L	8-50
Bilirubin -Total	Mg/dL	0.3-1.0
-Direct	Mg/dL	0.1-0.3
-Indirect	Mg/dL	0.2-0.7
Protein -Total	g/dL	5.5-9.0
-Albumin (A)	g/dL	3.5-5.5
-Globulin (G)	g/dL	2.0-3.5
-A/G ratio	-	1.5-2.5
PT	Seconds	11-13
INR	-	0.8-1.3
APTT	Seconds	25-35

Example case scenarios

1. **Case 1**

A 56-year-old lady was admitted to medical casualty with fever with chills, lower abdominal pain and dysuria for 5 days. She has loss of appetite, nausea and vomited twice at home. She is on metformin and gliclazide for diabetes and atorvastatin for dyslipidemia. She was diagnosed with diabetes 7 years ago and was on medication regularly and followed up in the medical clinic. Her compliance was satisfactory and glycaemic control was fair. Last HbA1C was 7.2% a month ago. She has frothy urine noted during the last two months but had never passed blood in urine. She has undergone echocardiography and done ECG 3 months ago as a part of her medical checkup and said to be normal by then. She lives in Kuruvita with her husband and her two daughters (15 and 18 years) and works in the Bank of Ceylon as a clerk.

On examination she is febrile and there is lower abdominal and left loin tenderness. She is haemodynamically stable with blood pressure of 130/80 mmHg. Her neurological, cardiac and respiratory examinations were unremarkable. Her vision is normal. Her random blood glucose is 312 mg%

a) Identify the clinical problems this patient is having.
b) Outline the biochemical mechanism of hyperglycemia in this patient
c) How do you manage the acute medical problem during the first 24 hours?
d) What are the likely complications this patient may develop?
e) What is your discharge plan?

2. **Case 2**

A 62-year-old man with diabetes for 4 years and hypertension developed acute retrosternal chest pain while in the paddy field. He was brought to medical casualty by his family. He describes the pain as tightening and radiating to the jaw and the left arm. It started 30 minutes ago, and the intensity of pain is very high. He smokes about 5 cigarettes per day.

He was sweaty and dyspnoeic and on admission. His BP was 110/70 mmHg and pulse rate was 96 bpm. An ECG was taken and was connected to the cardiac monitor in HDU (High Dependency Unit). His saturation was 94% on room air. Examination of lungs revealed bi-basal fine crepitations up to one third of the lung fields. First and second heart sounds were normal, but the third cardiac sound was audible, without a murmur. All the peripheral pulses were normal. Rest of the physical examination is normal.

The ECG taken at the time of the admission is shown below…

a) What is your diagnosis?
b) On what features in the history did you arrive at the diagnosis?
c) What could be the anatomical basis of the pain he felt?
d) What further investigations do you request to confirm and grade the severity of the condition?
e) Outline your management for this patient at the medical casualty ward.
f) What are the likely adverse effects of your medications?
g) Explain the scientific evidence behind using the ~~acute~~ medications that you prescribed at the initial management?

3. Case 3

A 45-year-old man was seen at the medical casualty, presenting with acute epigastric pain since that morning for about 8 hours. He has nausea, vomiting and sweating with pain. He has vomited thrice and the vomitus was watery and frothy without food content or blood in it. He has been on antacid for similar episodes before and this time it's much worse. His pain aggravates when he misses a meal or has a binge of alcohol. He is a binge drinker and attends parties and owns a liquor shop in Rathnapura. He drinks at least 3 or 4 times a week and smokes about 4 cigarettes a day.

On examination this average built man in his pain, holding to upper abdomen bending forward and seated on his bed. His pulse is 90 bpm and BP is 130/80 mmHg. He is not pale, not icteric and not febrile. Abdomen is tender at the epigastrium without guarding or rigidity. Heart is in dual rhythm without added sounds and lungs are clear.

a) List your differential diagnoses (at least 3)
b) State the points in the history you would ask this patient in order to arrive at a tentative diagnosis
c) Explain how you investigate this patient to arrive at a diagnosis
d) Outline the pathology in the organs that are affected by excess alcohol
e) What is your management for the most likely diagnosis?
f) How do you advise this patient for secondary prevention?

4. Case 4

A 36-year-old man was admitted to medical casualty with fever, cough and yellowish sputum for 5 days. He complained of chest tightness and difficulty in breathing last night and this morning but has improved a bit when came to the hospital. He has had wheezing attacks

when he was a child but had not suffered since then. In addition, he is on amlodipine and rosuvastatin for hypertension and dyslipidaemia. He is allergic to penicillin and has attacks of dyspepsia and heartburn frequently. He doesn't smoke or drink alcohol. He works in a jewelry shop in Eheliyagoda and has two children aged 7 and 5 years and his wife.

On examination he is febrile, pale and tachypnoeic. His respiratory rate is 30 bpm and pulse rate is 96 bpm. Blood pressure 110/70 mmHg and heart sounds are normal. There is bronchial breathing at the right lower zone, best heard from behind. Coarse crackles were heard on the right lung. Abdominal and neurological examinations are unremarkable.

a) What is your clinical diagnosis?
b) What are the likely aetiologies for the condition?
c) How do you confirm your diagnosis given in questions a) and b) above?
d) Describe the pathogenesis of the physical signs he is having in the lung.
e) Describe how you assess the severity of the condition to decide on level of care?
f) Outline your management during the first day of the treatment?

5. Case 5

A 34-year-old gem miner from Elahara admitted with fever and chills for 4 days. He had vomited twice on the day of the admission and complained of reduced urine output and faintness. Previously he used to be healthy and not been on any medication. He chews a lot of betel, drinks alcohol occasionally but does not smoke.

On examination he is averagely built and looks weak. He has tenderness of his calf muscles. His pulse rate is 100 bpm and BP is 100/60 mmHg. Cardiac examination is normal, and lungs are clear. Abdomen is slightly tender at the epigastrium, but the rest is normal.

a) What is your differential diagnosis based on the history and examination?

Following are some of the investigations available.

- *Full blood count: Hb – 13 mg/dL, WCC – 14,000 μL^{-1}, granulocytes – 70%, lymphocytes 22%, Platelets – 168,000 μL^{-1}*
- *Urine full report: pus cells – 2-3 HPF, red cell – 10-15 HPF, prot - +, sugar – nil*
- *Liver profile – AST – 34 U/L. ALT 23 U/L, ALP – 412 U/L, GGT – 115 mg/dL, Prot – 4.5 mg/dL, Alb – 2.5 mg/dL, Glob – 2 mg/dL*

b) Based on the investigations, what is your diagnosis?
c) What are the complications of this condition?
d) How do you manage this patient during the first day of the admission?

e) During the stay his urine output did not improve and 3 days after admission, he developed anuria. His S.Cr is 5.4 mg/dL (0.6-1.2), urea is 52 g/dL, Na – 138 mEq/L, K – 3.2 mEq/L and Cl – 102 mEq/L.
f) What could be the pathogenesis of his acute kidney injury?
g) Discuss the management options that may be required to further manage this patient.

6. Case 6

A 72-year-old man was brought to the hospital after being unresponsive since early morning. He was active and spoke to the family as usual the previous night, before going to sleep. He is a diagnosed patient with diabetes, ischaemic heart disease and hypertension. He is on metformin, losartan, atorvastatin and aspirin. His last FBS is 128 mg/dL and the creatinine is 1.2 mg/dL, done a week ago.

On examination his GCS – 7/16, BP – 140/80 mmHg, pulse – 100 bpm, heart in dual rhythm and the lungs are clear. Abdomen is soft and non-tender. He is unable to respond to commands, so the neurological examination is difficult and unreliable. However, it is apparent that his right hand and the leg are floppy but there is some strength on the left side. There is deviation of his mouth to the left side, and the pupils are equal and reactive.

a) What is your diagnosis?
b) How do you confirm your diagnosis?
c) How do you manage this patient during the acute stage?
d) What could be the vascular territory affected?
e) What are the complications likely to develop from this condition?
f) How do you minimize a second similar episode?

7. Case 7

A 42-year-old lady, a shop assistant, was seen in the clinic with a complaint of recent weight gain, lethargy and constipation. She finds it difficult to concentrate on her work during the day as she feels sleepy when looking at the computer. She frequently gets cramps in her limbs. Her menstrual periods are irregular, sometimes heavy, which she thinks due to her age. She is on enalapril for her hypertension and atorvastatin for dyslipidaemia. She has undergone two caesarian sections and an appendicectomy 2 years ago.

On examination she is 78 kg and 158 cm. Her pulse 56 bpm and BP is 140/90 mmHg. Cardiac examination is unremarkable and so does the lungs. Abdomen is distended but soft and non-tender. No abnormality detected from the neurological examination.

Following are some of the investigations performed on her.

FBC – Hb – 10.2 mg/dL, Plt – 230,000, WCC – 11,000, Granulocytes – 68% and lymphocytes 18%, MCV – 100, MCH – 25,

S. Cr – 1.02

Na – 128 mmol/l, K – 3.8, Cl – 102

FBS – 88 mg/dL

Lipid profile: TC – 234, LDL – 130, TG – 320, HDL – 48

Answer the following questions

a) What is the likely diagnosis that could explain her clinical features and abnormal laboratory test results?
b) How do you confirm your main diagnosis?
c) What are the complications of this condition?
d) What are the medications you may add for this patient?
e) What advice would you give when you start on those medications?

8. Case 8

A 28-year-old man was admitted to the medical casualty with fever for 2 days and faintness. He had vomited 10-15 times and had 5 episodes of watery diarrhoea. He was not eating and drinking adequately. He denied any symptoms related to respiratory and urinary infections.

He was given ORS, paracetamol and domperidone and started on a fluid balance chart. Following are some of the investigations received on the next day?

FBC – Hb – 12 mg/dL, Plt – 168, WCC – 3.2, Neutrophils – 38%, Lymphocytes – 52%

UFR – pus cells – 2-3/phf, red cells – nil/ phf, no protein or sugar

ALT – 98, AST – 67

a) What is your differential diagnosis at this stage?
b) How do you confirm your diagnosis?

Two days after admission, the patient became more ill and fever continued. His urine became darker and scantier.

c) On what physiological basis do we give ORS to patients?

d) What are the likely complications developed in this patient?

e) What would be the pathology in the kidneys at this stage?

f) How do you further evaluate to optimize the management?

9. Case 9

A 68-year-old male was admitted to the casualty medical ward with somnolence and deterioration of general condition. He was not oriented to time and place and sometimes he was unable to recognize his daughter who was caring for him. He refused food and has taken a little soup and yoghurt. On examination he had a tinge of jaundice and pitting ankle edema. His abdomen was distended and there was evidence of free fluid. He had diabetes and hypertension which were well controlled over the last few years. He is a retired security guard. During his youth, he had taken alcohol regularly about ¼ bottle of arrack per day.

a) What is your clinical diagnosis?

b) Give 5 possible precipitating causes in this patient

Following are investigation findings done at the casualty medical ward

FBC – Hb – 10 mg/dL, Plt – 168, WCC – 19.1 Neutrophils – 88%, Lymphocytes – 11%

UFR – pus cells – 20-35/PHF, red cells – occasional/ phf, protein trace and sugar nil AST 42 IU/L, ALT 51 IU/L, Alkaline phosphatase 310 IU (normal 44-147IU/L) CRP was 126 mg/dl,

Capillary blood sugar was 62 mg/dl. ECG was normal

c) What is the next line of investigations?

d) Outline your management in the casualty ward.

e) What are the complications you expect in this patient?

f) What is the pathogenesis of his drowsiness?

g) What are the measures you would like to take to prevent complications?

10. Case 10

A 32-year-old patient presented to the outpatient department with fever, sore throat, enlarged tender cervical lymph nodes over the last three days. On examination revealed

maculo-papular rash, enlarged tender multiple lymph nodes in the cervical region and had soft palpable spleen.

a) Give 3 differential diagnosis.
b) List 5 investigations you would order and mention expected findings in three differential diagnosis you listed.
c) Mention confirmatory tests for each of your differential diagnosis.

During the ward stay she developed mild jaundice and haemoglobin was dropped by 2 g/dl

d) What would have happened?
e) How do you confirm your diagnosis?
f) Outline the management.

CHAPTER 5

REFLECTIVE LOG

Medical professionals face many challenges during routine clinical practice. They adopt two strategies

1. Technical thinking
2. Critical thinking

Technical thinking adopts ready-made solutions such as strict adherence to treatment protocols. Critical thinking adopts a tailor-made approach to the individual patient, adopting a purposeful, reasoned and goal approach. In reflective practice practitioners will turn back and analyze the situation considering the strategies adopted to overcome the challenges and whether it would have done differently to achieve a better outcome.

Reflection is described in medical education as a process in which practitioners will turn back and analyze an event or situation and the outcome of it with greater understanding or awareness intending to learn and improve in practice of medicine. It is useful in areas of analyzing ill-defined problems of professional practice before, during and after the situation. This metacognitive process will develop greater understanding of both self and the situation to improve the practice in future encounters using the experience from the previous encounters.

Reflective practice consists multiple cycles including performing, reviewing and planning. Individuals can analyze the situation during the experience or after the experience. The questions that are likely to come across the practitioners' minds should be, "Is what I do satisfactory?", Why was it successful?", "Why was it unsuccessful?", "Whether I should do it differently?", "How should I do it differently?".

In reflective thinking process you examine your own thoughts at the beginning revisiting your prior experience and knowledge. Then you are able to critically analyze the situation as follows.

1. Look back at the situation or the event that happened.
2. Explore knowledge, feelings, reactions, responses to the particular situation.

3. Analyze the event or situation in depth and look at the same situation in different perspectives.

4. Identify how you would address the situation and think of the new skills and knowledge you would need.
5. Look at the relationship between theory and practice and adopt new skills to manage the situation.
6. Gain skills to improve knowledge understanding gaps in order to address similar situations in future.
7. Further develop self-awareness in order to progress as a learner.

<u>How to write a reflective log</u>

1. Describe the event. Write what happened.
2. Analyze the event. Why did it happen? What did you feel? Can you explain the situation with what you have learned so far? Can you explain how you would act to the same situation in different perspectives and with different circumstances?
3. How was the situation managed? What was the outcome?
4. What did you learn by reading or speaking to experts on managing such situations?
5. Do you have any ideas for a different way of managing the situation? How will that influence the outcome?
6. What did you learn? How did it help you to do differently, next time?

CHAPTER 6

VALUES, MEDICAL ETHICS AND KINDNESS

Values are ideals of individuals or a group or society about what is good or bad. Respecting elders is a value in our Sri Lankan society.

Ethics and morals relate to “right” and “wrong” conduct. The two terms are sometimes used interchangeably. However, they are different: Morals refer to an individual's own principles regarding right and wrong. In contrast, ethics refer to rules provided by an external source.

“Ethics” is more concerned with studying and/or building up a coherent set of “rules” or principles by which people ought to live or practice his / her profession. Examples include the Codes of Conduct published by the Sri Lanka Medical Council or principles in medical ethics.

Being kind towards patients, carers and colleagues is increasingly recognized as a key attribute of health workers. Patients who visit health facilities or get admitted to hospital are often worried about their illness, fearful of outcomes or pain and sad about having to leave their loved one. Speaking and behaving in a kind manner helps to reduce their worries and calm their fears. It also helps to build rapport with patients and makes them recover faster. A gentle smile, kind tone when talking, listening to the stories they have to say, all go a long way.

What are the principles of medical ethics that we commonly use?

1. **Autonomy**

It recognizes the right of an individual to self-determination and respect for an individual’s ability to make informed decisions about personal matters. Patients have freedom of thought, intention, and action when making decisions regarding health care procedures. For a patient to make a fully informed decision, she/he must understand all risks and benefits of the procedure and the likelihood of success of all available options. Patients may choose among treatment options or refuse care, even if the recommended treatment is lifesaving. In Sri Lanka, autonomy is often shared with others in the family. As a result, key decisions are taken by the patient and other family members. This is common in Asian cultures.

2. Non-maleficence; do no harm

The principle of non-maleficence is not absolute and must be balanced against the principle of beneficence (doing good). It is more important not to harm your patient, than to do them good. This is partly because enthusiastic practitioners are prone to using treatments that they believe will do good, without first having evaluated them adequately to ensure they do no (or only acceptable levels of) harm. Make sure that the procedure does not harm the patient or others in society either unintentionally or deliberately.

3. Beneficence

The term beneficence refers to actions that promote the wellbeing of others. In the medical context, this means taking actions that serve the best interests of patients.

4. Justice; treating people equitably and fairly

The distribution of scarce health resources, and the decision of who gets what treatment. When some goods and services are in short supply, fair means of allocating scarce resources must be determined.

Study the following cases and identify the ethical aspects involved in them

a. Case 1

A 58-year-old businessman is diagnosed to have motor neuron disease and children insist on not telling the diagnosis to the patient

a) What is the ethical principle behind this case record?
b) Describe briefly the adverse consequences of not telling the diagnosis to the patient.

b. Case 2

A 78-year-old patient who has advanced dementia is admitted with type 2 respiratory failure secondary to aspiration pneumonia. Patient had been basically bedbound at home for 6 months and had very poor oral intake with some difficulty in swallowing during the last month. His only child who came from abroad requested ICU care with mechanical ventilation.

a) Discuss the application of ethical principles of beneficence, non-maleficence and justice in this case.

c. Case 3

Surgical team in the emergency treatment unit had done an emergency orthopaedic surgery to a 51-year-old patient who was admitted after a road traffic accident. Patient had been drowsy on admission and was unable to get informed written consent. Unfortunately, the patient died due to a complication of the surgery and the family has filed a medical negligence case against the orthopaedic surgeon.

a. What are the ethical issues you identify in this case record?
b. Whether the surgeon is guilty in his action? Explain your answer.

d. Case 4

A 58-year-old patient who is diagnosed to have advanced lung cancer was admitted with difficulty in breathing and hypoxia. The patient requests mechanical ventilation and ICU care. There is only one ICU bed available in the hospital which is vacant and a post-operative 71-year-old previously healthy patient with bronchopneumonia is waiting in the medical ward on CPAP awaiting mechanical ventilatory support.

Explain the application of following ethical principles.

a. Autonomy of the 58-year-old patient.
b. Principles behind the allocation of an ICU bed in the hospital (Justice).

CHAPTER 7

HOME VISIT

The objective of the Home Visit is to experience the home environments of patients and learn the aspects of care of patients in their homes after discharge from hospital and to appreciate the social factors that have contributed to the patient's illness.

There are several reasons to include a Home Visit component to the student's clinical appointments. Firstly, most hospital patients do not have a clear 'discharge plan' prior to leaving hospital which ensures continuing care and support at home. Such decisions ought to be made by a multi-disciplinary team that includes occupational therapists, social workers and physiotherapists. Secondly, there is no effective and organized community-based system of healthcare or social care to support such patients in their home environment (e.g. a patient recovering from a disabling stroke or an unsteady elderly patient). As a result, most of these needs of patients are met by family members, relatives, friends and poorly trained care-givers. Often the level of care is not optimal and poorly coordinated. Finally, the Ministry of Health is planning to establish a curative primary care network that will meet these needs in a comprehensive manner.

Future generations of hospital-based doctors should therefore become aware of the home environments of patients in order to advise or provide comprehensive care for their patients using the available facilities. The other important learning point is that you will appreciate the home environments and social factors that affect the health of people in Sri Lanka.

The format of the program:

We give below a simple format of a program on Home Visits and give examples of learning opportunities.

1. Criteria for selection of patients: acute illness or chronic illness or elderly patient whose home is in a safe environment within easy distance from hospital. The following are a few examples of disorders we hope to allocate to you.
    a. Diabetes mellitus with complications
    b. Stroke
    c. Heart failure
    d. Chronic liver cell disease (Decompensated)

e. Drug dependent

f. Paralysis other than stroke (e.g. Gullian Barre Syndrome)

g. Severe debilitating arthritis

h. CKD

i. Recovering from AKI due to an acute illness such as leptospirosis or snake bite

2. Select 6-8 students per patient who will gather relevant information by taking a history, speaking to members of the family and examining the patient. Students should study around the problems faced by the patient, understand the pathogenesis of his / her illness and learn the basis of how the patient was managed in the hospital with a special emphasis on comprehensive care and disease prevention. However, these are not the areas that are the focus of the Home Visit.

3. Arrange for home visit: It is best to inform the MOH of the area and obtain details of how to visit and safety of the environment. Preferably visit the area with a staff member from the MOH office. All members of the group should make at least TWO home visits to observe and assess the patient in the home environment. A senior registrar, registrar or staff member may visit the home with you.

At least THREE visits are required to gain maximum effect.

4. The first visit is to gather data and information. This will enable a list of problems to be identified. The experience from several student groups were used to develop a comprehensive list of issues.

These can be categorized as follows:

- Medical problems
- Physical issues including Activities of Daily Living (ADL)
- Psychological / personal problems
- Social aspects (education and occupation)
- Environmental issues (hazards, risks, and exposures)

After this the students discuss among themselves and tutors to think of a few selected interventions.

5. During the second visit the students agree with the patient and family on the possible interventions and implement them. Resources easily available to the household are used in this process.

6. A third visit is to evaluate the progress made. If you are unable to visit, at least speak to the patient and family members over the phone and assess progress.

7. Meet relevant resource persons to get more information on how to obtain support for the patient while at home (e.g. Academic Staff of the Community Medicine Departments, MOH, and social workers).

8. Assessment is based on the selection of the case, the problems identified, and possible interventions, and the presentations.

Guidelines for presentation

a. All presentations in front of the group or during the interview should be in PowerPoint (A maximum of 15 slides with font size 24) and last a maximum of **10 minutes per group**.

b. Describe the case using 2 slides that give a brief history, physical examination, investigations and a comprehensive diagnosis.

c. Describe a list of issues categorized as

   - Medical problems including ADLs
   - Psychological / personal problems (habits and lifestyles)
   - Social issues (3 slides): occupation, financial issues, social networks.
   - Environmental issues (hazards, risks, and exposures)

Guidelines in home visit

a. Describe the list of problems identified in the home environment and possible interventions to solve them (e.g. using resources from the household, Ministry of Social Services, NGOs, or, religious organizations etc.)

b. Describe simple interventions you planned and did, and their impacts.

DETAILS OF THE PATIENT

Name: …….. Contact number:

Occupation: …… Age: …… Sex: Male / Female

NIC if available:

Address: ……

……

……

Summary of Case (similar to the way you would summarize a "long case")

History:

Examination:

Investigations:

Comprehensive medical diagnoses

Narrative: A description of problems and needs to be identified by the patient and members of the household during your visit (i.e. a narrative). Please use their words (either Sinhala or Tamil) and write in the form of a 'story' and NOT as a checklist.

CHAPTER 8

MY CASE SCENARIOS

In this section we expect you to write **10 case histories** of patients that you encountered during your training in Medicine. You may add extra pages as required to the workbook to complete this section.