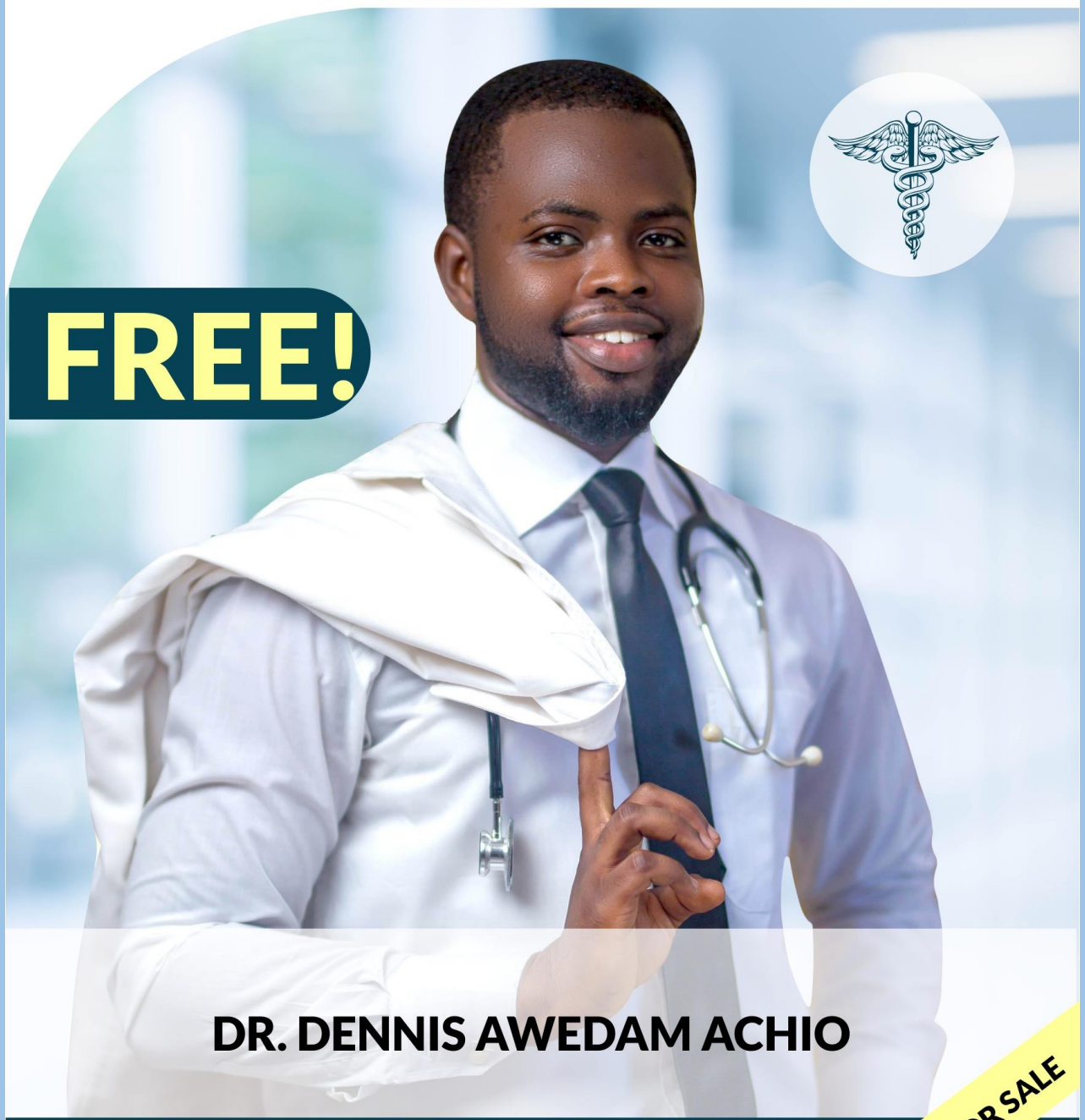
A GUIDE TO EFFECTIVE PREPARATION TOWARDS THE GHANA MEDICAL AND DENTAL COUNCIL EXAMINATION

(FOR FOREIGN TRAINED MEDICAL DOCTORS)



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DR. DENNIS AWEDAM ACHIO

NOT FOR SALE

A GUIDE TO EFFECTIVE PREPARATION TOWARDS THE GHANA MEDICAL AND DENTAL COUNCIL EXAMINATION

FIRST EDITION 2020

GHANA

By

DR. DENNIS AWEDAM ACHIO

INTRODUCTION

Many students preparing for this examination do have questions on the approach and nature of the examination: what it entails, the structure of the questions, what is required, etc.

This guide will answer the most commonly asked questions by candidates and will help one to understand how to get an effective approach in preparing towards the Ghana Medical and Dental Council Examination.

This guide is not from the Ghana Medical and Dental Council. It was compiled by the author to help provide a guide to all students preparing for the council's examination.

Other editions will be made as the examination pattern changes.

DEDICATION

I dedicate this work to my lovely parents Prof. Sylvester and Mrs. Monica Achio, who taught me to give back to society and never give up my dreams. "Everything is possible if you set your mind to it".

Also to Emmanuel Achio, Irene Samari, Marilyn Marcia Mills, Mr and Mrs Mills, Mark Charles Tawiah and to all preparing for the Ghana Medical and Dental Council examination.

ACKNOWLEDGEMENT

I am very grateful to Prof. Sylvester Achio and Rev. Fr. Prince Zita A. Marfo for taking their time to go through this guide;

Also to Dr. Emmanuel Buhari Akiteyi, Dr. Asaah Richard Atubila and Dr. Ofori Nyarko Nicholas for sharing their experience with the author.

CONTENT

GHANA MEDICAL AND DENTAL COUNCIL

COUNCIL

The Medical and Dental Council is a statutory body established by law; Health Professions Regulatory Act, 2013 (Act 857).

OBJECTIVE

To secure in the public interest the highest standard in the training and practice of medicine and dentistry.

MANDATE

Standards, Training, Registration and Regulation.

VISION

An internationally acclaimed competent regulatory authority for medical and dental practice in Ghana, for the public good.

SHARED VISION AND MOTTO

Guiding the profession, protecting the public.

EXAMINATION AREAS

- Internal Medicine
- Surgery
- Obstetrics and Gynecology
- Pediatrics
- Community Health

It always seems impossible until is done.

-Nelson Mandela-

PREPARING FOR THE EXAMINATION

1 year 6 months prior to the examination:

- Internship in Ghana: join the medical students and take part in all what they do academically, a teaching hospital or quasi hospital is advised.

- Read recommended text books:

  *** Davidson's and oxford handbook of medicine ~ Internal Medicine**

  ***Illustrated textbook of pediatrics ~ Pediatrics**

  ***BAJA Surgery text book ~ Surgery**

  *** handbook of obstetrics and gynecology ~ Obstetrics and Gynecology**

  *** Public health medicine for the tropics. ~ Public health**

  *** Pathoma textbook**

- Ask for advice from persons who have gone through and successfully passed the examination.

- If your school doesn't permit it's students to come home for internship, do well to have at least 6 months hospital attachment or classes before sitting for the examination to gain practical experience.

6 months prior to the examination:

- After graduation, it's recommended to use the Korle-Bu slides and audio.

(https://drive.google.com/folderview?id=1Leyy-sccuCHd6JNiz31G3_h5FqWLKo83)

- Form a study group with 2-5 serious students.
- Register with the Medical Council.
- Get a timeline study time-table,with the aim of finishing at least one month to the examination.
- Practice examination skills (OSCE).
- Solve questions and have group discussions.
- Make short notes for '11th hour' recollection.

1 month prior to the examination:

- You should have finished all readings.
- You should be ready to answer questions and be able to demonstrate good examination skills (OSCE).
- Identify your weakness and revise all ill grasped concepts.
- Pray for grace.

1 week prior to examination:

- You should have worked on your weakness.
- You should have a good understanding of clinical knowledge and a strong foundation in pathophysiology.

1 day prior to examination:

- Revise your short notes.
- Have at least 6 hours of quality sleep.

The day of the examination:

- Wake up early enough and prepare for the examination.
- Take breakfast.
- Pray and do your best.

HOW TO REGISTER FOR THE EXAMINATION

- Go to the Council for the registration form at least 6 months before your intended examination month.
- If you are not clear about the requirements on the form, you can ask for clarification from the personnel at the office.
- It is advisable to submit your filled form and other required documents at least 3-4 months before your examination month, as the Council will have to confirm your details with the institution you graduated from.
- You will be informed by the Council on when to make payment for the examination, which is mostly a month to the examination day.
- Aside Accra , the Council has branches in Kumasi and Tamale where registration and payment can be done.
- After payment you will be given a date to come for a letter which will state your index number, venue of the examination, and the viva schedule (this letter will be given by the Accra office, hence candidates are advised to come to Accra for them).

WHAT IS THE REGISTRATION FEE?

As at February 2020, the charge was $770. It was taken in Ghana Cedis equivalence.

MISTAKES COMMONLY MADE IN PREPARING FOR GMDC EXAMINATION

- Not having at least 6 months hospital training or attachment in Ghana.
- Being in a rush to write because others have passed when you are not fully prepared.
- Starting to study too late for the examination.
- Using the wrong resource materials for study.
- Studying materials without guidance on key areas to focus on.
- Depending solely on classes to pass the examination.
- Preparing alone for the examination.
- Not heeding advise from successful candidates of the examination.

HOW IS THE EXAMINATION STRUCTURED?

As at February 2020, the examination consisted of multiple-choice questions, long cases and a viva session.

Multiple-choice questions are 100 in number, 20 questions from each examination

area for a time period of 2 hours.

Long case questions are 25 with 4 sub-questions, 5 questions from each examination area for a time period of 2 hours 30 minutes.

The viva has a station for each examination area. Each candidate spends at least 10 minutes at each station. Making a total of 50 minutes for the viva.

The multiple-choice and long case questions are written on the same day with a 10 -15 minutes break interval.

The viva is scheduled for a different day where you are examined on the 5 examination areas.

NB: From 2022 there will be a change in the examination pattern. See UPDATES for more details.

Procrastination is the art of keeping up with yesterday.

-Don Marguis.-

HOW TO APPROACH MULTIPLE-CHOICE QUESTIONS

Multiple choice questions are geared towards understanding basic concepts in medicine and as well closely differentiating the right answer from the wrong with a firm understanding of all concepts.

You need to take into account the texts in the text books you mostly ignore when reading or studying.Every text is important.

Your pathophysiology must be well understood to differentiate one pathology from the other. I suggest you use **pathoma** textbook at least one year to the exams and it can be used as a reference option during the preparation.

Try as much to exclude the less possible or less likely answers and narrow down to the most likely answers, then based on the case or question choose the most appropriate answer. Do not waste time on one question when you seem not to be making a head way. Continue with the other questions and when you are done revisit the unanswered ones.

For Example

What is the common cause of upper gastrointestinal bleeding?

A. Peptic ulcer

B. Bleeding Esophageal varices

C. Gastric cancer

D. Mallory Weiss tear

Mallory Weiss tear is a laceration of the mucous membrane at the gastro esophageal junction which occurs due to forceful or long term vomiting leading to gastrointestinal bleeding.

Gastric Cancer is cancer of the stomach, which mostly occurs as a complication of gastric ulcer.

Bleeding esophageal varices occurs in patients with liver cirrhosis, resulting in abnormal dilation of the venous supply to the lower esophagus, which may rupture and cause gastrointestinal bleeding.

The above are less common causes of upper GI bleeding.

Peptic ulcer occurs due to h.pylori or increase in gastric acid, causing erosion or damage to the gastric or duodenal lining resulting in gastrointestinal bleeding. It is very common in our part of the world due to poor food and water hygiene (h. pylori) or intake of NSAIDS, and its the most common cause of GI bleeding

The answer is **A**

There is no substitute for hard work.

-Thomas Edison-

HOW TO APPROACH LONG CASES

They are mostly centered around the most common cases seen in the wards and it is aimed at applying clinical knowledge. The key here is to ensure that you answer at least 3 questions correctly from each examination area because you must pass each examination area.

When you are asked, **"How will you diagnose"** a patient?

You have to talk on taking a good history, examination and investigation; stating what you will find to point to the diagnosis.

Note that "**what is your diagnosis"** is just a clinical diagnosis.

When you are asked **"How will you manage"** a patient?

You will have to talk on the investigation (diagnostic and supportive) and treatment.

When you are asked to **"Treat"** a patient:

You will have to talk on pharmacological and non pharmacological treatment. Specific drug dosages are not mostly required eg. amoxicillin 500mg 12hourly for 7days, broad terms drugs such as antibiotics are required unless the question specifically ask for specific dosage or you are very sure of the dosage.

For Example

A 26 year old nulliparous woman (a woman who has never given birth / a woman who has never completed a pregnancy beyond 20 weeks / a woman in

her first pregnancy and who has therefore not yet given birth) who has had amenorrhea for six weeks now has cramping lower abdominal pain and vaginal spotting (Bleeding).

a. Discuss the diagnosis, the differential diagnosis and the management.

Diagnosis: Ectopic Pregnancy

A woman presenting with Amenorrhea + Abdominal Pain (before) + vagina Bleeding, think of ectopic pregnancy until proven otherwise.

But if a woman presents with Amenorrhea + vagina bleeding(before) + abdominal pain , think of abortion until proven otherwise.

Differentials :

- **Adnexal Torsion**
- **Spontaneous Abortion**
- **Pelvic Inflammatory Disease (PID)**
- **Molar pregnancy**
- **Endometriosis**
- **Ruptured Ovarian Cyst**
- **Hemorrhagic Corpus Luteum**
- **Appendicitis**
- **Diverticulitis**
- **Urinary calculi**

Management:

Investigation:

(Diagnostic investigation)

- **Laparoscopy**
- **Abdomino-pelvic ultrasound**
- **Serum beta-HCG**

(Supportive investigation)

- **Full blood count**
- **Clotting profile**
- **Culdocentesis**

Treatment:

1.Access the airway, breathing and circulation ,set a line and take blood for lab work including grouping and cross-matching, give IV fluids and pass a urethral catheter.

2.Give tranesamic acid to stop bleeding.

3. Blood transfusion if patient is hemodynamically unstable.

4. A patient with ruptured Ectopic will need immediate surgery(laparotomy).

5.Patients with non-ruptured Ectopic will be admitted and definitive treatment may be done operatively by laparoscopy or with methotrexate.

6.Stable patients with progressive decreasing in BHCG level are observed closely with regular BHCG check to assess continuous decline in the level.

Light at the end of the tunnel is seen only by those who persevere to the end.

-Dennis Achio-

HOW TO APPROACH VIVA

The Viva tests your general approach to managing cases and how to keep a patient alive. You need a strong clinical knowledge base for this session.This part of the exam can frustrate you but you need to be bold, stay focused and don't stop talking when you are asked a question you know so well and are sure of till the bell rings. Do not explain anything you are not asked and pay close attention to the questions to answer them accordingly.

Dress formally; Guys should do well to put on a neck tie:

Examples of questions asked.

1.A two year old presents with difficulty in breathing, what questions will you ask the mother and how will you assess and manage this patient?

2.Examine for ascites, what are the causes of ascites?X-ray reading, what is the management of heart failure?

3.How will you assess obesity and how will you manage it? What are the routes of mother to child HIV transmission? What is a medical journal?.

4. What is Postpartum hemorrhage? What is pelvic inflammatory disease?

5. Tell me every thing about Peripheral artery disease, surgical site infections, tetanus.

WHERE IS THE EXAMINATION TAKEN?

It is taken in Accra. A detailed address will be stated in your letter.

HOW LONG WILL IT TAKE FOR THE RESULTS TO BE RELEASED?

The results are released mostly in 3 to 4 weeks, after the examinations, unless there are delays in the score processing. The Council will notify you if there will be any delays.

WHAT IS THE PASS MARK?

A 50 % mark or above is the pass mark.

EXPERIENCE FROM COLLEAGUES

DR. EMMANUEL BUHARI AKITEYI

Preparation Experience

Studying for the Ghana medical and dental council examination can be very stressful and frustrating sometimes.

With my experience, to get through it successfully, you need a conducive environment full of positive energy and most importantly family support because there will be times you will really feel down and depressed. They will help you get through it.

Also, you have to know yourself better. For example after graduation my friends and I did some analysis and realized that for us, we needed to form a discussion group instead of going for classes or doing another hospital rotation. And I quite remember there was a day we were having this discussion and a group of our colleagues came and saw us and were mocking us, thinking we were on the path to failure since we are not doing any hospital rotation. Guess what? it worked for us and

we passed, so at the end of the day you don't have to do what everyone else is doing for you to pass. Just do what you feel is best for you. There is no constant formula here.

When it comes to the examination itself, the time will always not be enough, so don't waste time on a question you don't have an immediate idea on. Deal with the ones you have an idea on and later come back to try and solve the others.

For the viva all I can say is no matter how they try to annoy or intimidate you, just keep your calm. Don't fall for that trick. And lastly make sure you have a nice breakfast before the examination. I'll recommend 2 or 3 eggs before the examination. It works like magic.

DR. ASAAH RICHARD ATUBILA

Experience and Advice

Success in GMDC = Prayer (Grace) + Knowledge (so much of it) + Hard work

The joy of graduation were cut short at the thought of, what next in life? Time to face the Ghana Medical and Dental Council examination. Preparations towards this stressful journey I will say started partially during the internship in Ghana . But the real deal started after my graduation examination.

During the internship period, I was involved in group discussions with my colleagues who had similar ambitions like mine. We shared the high yield topics among ourselves, read on them and discussed them thoroughly. This made it a bit easier to cover the relevant topics when we returned from school to prepare for the examination.

The real preparation after graduation involved 6 months of constant studying, group discussions, answering past questions and I also wrote some online mock

exams. You need to accept who you are in your journey towards this examination. It's better to make all the mistakes before your colleagues and get ridiculed than to do so in the main examination. Sharing ideas and study materials with colleagues was the mainstay and it helped. Never be proud to ask a friend for explanation.

After months of studying, stressing out and moments of anxiety came the D-day. This examination is a speed one, there is no time to think through the questions. We were given 25 theory questions to answer in 2hours 30min. So you don't have to waste time on questions you can't answer on first attempt. Quickly finish what you know and come back to such questions. Be as fast and accurate as possible and try to answer every question where possible.

For the viva, go in with an open mind and never try to prove you know too much, remember they are consultants before you. But be confident of what you know and don't be carried away by their intimidation. With hard work, God will see you through.

DR. OFORI NYARKO NICHOLAS

Experience and Advice

The MDC Licensure examination is one of a career determining stage. This makes it quite tense and a little scary for many.

I'm sharing my experience with you as a friend. Few months ago, I was going through everything you are enduring now.

My advice to every foreign trained doctor is that, whatever it takes, try as much as possible to get a professional license after graduation in whichever country you wish to practice.

If you wish to write the GMDC examination kindly have a plan on when you wish to write it and work towards it.

The length of time will depend on your strength but know that everything you did throughout medical school will count as well.

Below are few tips that helped me which I want to share with you.

Those of us who studied in China Eg: Most universities in China have a policy of allowing medical students do a one year clinical rotation in any country of choice. If this policy applies to you, I recommend you do this rotation in Ghana, for at least 6 months. The benefit of such rotations in writing the GMDC examination can't be over emphasized.

If your university doesn’t allow such rotations in the final years you can still attach yourself to any hospital when you return home as you prepare.

About the examination: there are 3 main sessions currently; 100 multiple choice questions, 25 problem-based questions and a 50 minutes Oral/Viva, covering the 5 main clinical courses: Surgery, Internal medicine, Paediatrics, Obstetrics & Gynecology and Community health.

1. Try to thoroughly cover important topics relevant to the examination.

2. Get serious study partners to prepare with.

3. Study for examination with past questions.

4. Try and warm yourself up by writing mocks to help with your answering techniques and time management.

5. As much as possible go through every likely questions you come across.

Register for the examination with the sole aim of passing on first attempt. The stress in doing this twice is something you wouldn't wish for your worst enemy. Do away with fear and always believe you can make it. Pay less attention to the myths around this examination. Always seek facts from positive minded people. Have confidence and believe in yourself.

Above all trust only God on this journey. I wish you all the very best.

DR. DENNIS AWEDAM ACHIO

Experience and Advice

In addition to what my colleagues have said, studying for the Ghana Medical and Dental Council examination is not easy but it's also not impossible.

My preparation for the council's examination started during my internship period with good friends who were very serious. We had group discussions every single day, sharing ideas and leaving no stone unturned.

Along the line, studies became difficult because we were tired and felt like giving up. We took a two days break and then continued with refreshed minds. This worked better for us.

The point I am driving at is, you will get to a point where you feel very tired and want to give up. Know that it is normal and it will happen.

But when it does, do not choose to give up, just take a break , relax your brain and you will be up to the game when you pick up your book.

Also, there will be a lot of activities during your preparation periods to drift your attention away, eg, parties, ladies wanting you around them, guys trying to be with you every single time. Try your possible best to put them on hold till you are done with the examination, because these same people won't be around you when you fail. So be FOCUSED, be DETERMINED , and NEVER GIVE UP.

I wish you all the very best.

TABLE ON TOPIC AREAS

MEDICINE	OBS & GYN	PEDIATRICS	COMMUNITY HEALTH	SURGERY
Physical examination **(Cardiovascular, respiratory,GI, central nervous)** GASTROINTESTINAL **-chronic liver disease** **-Jaundice** **-Peptic Ulcer disease** **-upper GI bleeding** **-diarrhea** **-pancreatitis** **-Hepatitis** **-Crohn's disease** **-ulcerative colitis** CARDIOLOGY **-Pulse** **-Clubbing** **-Atrial fibrillation** **-JugularVenous**	-Abortions -Ectopic pregnancy -Premature rupture of membrane -Pelvic inflammatory disease -Antipartum hemorrhage (placenta previae, abruptio placentae) -postpartum hemorrhage -Cord prolapse -cord presentation -Cervical cancer -Endometrial cancer -Ovarian cyst -Infertility -Molar pregnancy	-Neonatal resuscitation -Croup -Epiglottitis -Bronchiolitis -Bronchopneumonia -Respiratory distress syndrome -Asthma -Neonatal jaundice -Neonatal sepsis -Febrile seizures -A febrile seizures -Epilepsy -Sickle cell disease -Diarrhoea -Cerebral palsy -Meningitis --Wilm's tumour -Hydrocephalus	-Scabies -Cutaneous larva migrans -Biostatistics -Statistical inference -Scales of data measurement(Norminal,Ordinal,interval,ratio) -Methods of representation of data(tables,graphs etc) -measures of central tendency(mean,mode,median) -measures of dispersion(range, standard deviation,variance,standard error, interquartile range etc) - Sampling -Normal(Gaussian)	-Acute appendicitis/ ruptured appendix -Typhoid ileal perforation -Acute pancreatitis -intestinal obstruction -Gastric outlet obstruction -pyloric stenosis -upper GI bleeding -Hernia(inguinal, femoral, para-umbilcal) -Scrotal swellings(epididymo-orchitis, testicular torsion, hydrocele, varicocele etc) -Anterior Neck swelling(thyroglossal duct cyst, bronchial cleft cyst, dermoid cyst etc) -Goitre

Pressure **-Acute coronary syndrome** **-Congestive heart failure** **-Infective endocarditis** **-Hypertension,** **Hypertension emergencies , antihypertensive drugs and side effects** **-Apex beat(position , characteristics , clinical examination)** **-Cerebrovascular accidents(stroke and TIA)** RESPIRATORY **-Pneumonia** **-Tuberculosis** **-Asthma**	-Fibroids -Polycystic ovarian syndrome -Infertility -Labour -obstructed labour -Hypertension in pregnancy(PIH eg. Preeclampsia,imminent eclampsia, eclampsia) -Anaemia in pregnancy -Malaria in pregnancy -Contraception -Amenorrhea -Breech presentation(types, risk factors,maneuvers) -physiology menstruation - anatomy of the female reproductive organ - abnormal uterine	-Malaria -Kangaroo mother care -Sickle cell disease -Burkitt's lymphoma -HIV/AIDS -G6PD deficiency -Necrotizing entero colitis -Syndromes (Down, Edward, Turner's etc) -Cyanotic congenital heart disease(TOF) -Birth injuries(caput succudaneum, cephalhaematoma, subgaleal haemorrhage, brachial plexus injury, clavicular fracture) -Failure to thrive -Birth asphyxia(esp. HIE) Intussusception -Subconjunctival	Distribution curve and it's characteristics, negatively skewed distribution, positive skewed distribution -Odds ratio -Chi square -P value -Null hypothesis -Alternate hypothesis -Alpha(type 1) error -Beta(type 2) error -Confidence interval -T test. -Cross over study -Supervision -Water purification and qualities of a good water -Epidemiology and methods(descriptive,analytical,experimental, clinical trial) -Immunity(HERD)	-Tongue Cancer -Ulcers -Acute cholecystitis -Cholelithiasis -Ascending cholangitis -Obstructive jaundice -Peptic ulcer disease(Gastric cancer and duodenal perforation) -Acute abdomen -Burns --Breast Cancer -Prostate cancer/BPH -Fractures(esp. femoral neck fractures,supracondylar fracture, colles fracture, monteggia and galleazi Fractures) -Ulcers -Lymphoedema -Fluids and electrolytes -Haemorrhoids

-Chronic Obstructive Pulmonary Disease **-Pulmonary embolism** DERMATOLOGY **-Steven Johnson's syndrome** **-Atopic Dermatitis** ENDOCRINE **-Diabetes (Complications, DKA,HHS, drugs and its side effects)** **-Cushing' s disease** **-Hyperthyroidism** **-Hypothyroidism(myxo edema)** **-Adrenal insufficiency** RENAL **-Acute kidney injury** **-Chronic kidney disease** **-nephritic syndrome** **-nephrotic syndrome**	bleed	haemorrhage -Malnutrition -Gastroenteritis with dehydration -Hirschsprung' s disease -Haemorrhagic disease of the newborn (vitamin K dependent) -bluebaby -Unconscious child(Differentials , management) -Measles -Chicken pox -AKI -Nephrotic syndrome -	-Census(types, relevance & disadvantages) -Onchocerciasis -Hook worm disease -Schistosomiasis -Dog bite -Snake bite -Tetanus -Health and it ' s determinants -Sustainable developmental goals -Solid waste and management -NHIS -Household & housing -Levels and stages of prevention -Methods of control -Communicable diseases -sensitivity and specificity -Port health	-DVT/PE -Anorectal abscess -Anorectal fistula -Anal fissure -Breast cancer -Bones(femur, humerus, tibia ,fibula, skull, pedis,manus) and their pathologies(Fractures,osteo myelitis, osteosarcoma etc) -Surgical instruments -Peripheral vascular diseases

NEUROLOGY **-Upper and Lower motor neuron disease** **-Facial nerve palsy &Bell's Palsy** **-Pathway of 7th cranial nerve** **-Cranial nerve examination** OTHERS **-HIV/AIDS** **-Malaria** **-Sickle cell disease** **-Systemic Lupus Erythmatosus** **-Alcoholism**			-Community based health and planning services (CHPS) -Road traffic accidents -Expanded program on immunization -Management cycle(PIE-Planning, implementation, evaluation)	

SAMPLE COMPILATION QUESTIONS WITH ANSWERS

SURGERY

1. A 65 years old woman stumbles and fall when getting out of her bath tub. She soon experiences pain in her left hip and was found to have a shorten left leg.

a. What is the clinical diagnosis here?

Displaced Left Femoral Neck fracture

b. Indicate three principal means of managing this condition

1. Pain management

2. Immobilization

3. Early Surgery

- **Fracture reduction and Sliding Hip Screws**
- **Hemiarthroplasty**
- **Total Hip Replacement**

c. List three serious complications that may occur

1. Non-union

2. Avascular Necrosis

3. Complications associated with confining patient to bed: DVT, Pulmonary Embolism etc.

2. A 60 year old man had difficulty with micturition marked by poor stream, dribbling, hesitancy and occasional hematuria. Examination reveals a healthy looking man with a normal penile shaft and an enlarged elastic prostate showing median and lateral groove.

a. Name two conditions that must be considered in diagnosis

1. Benign Prostatic Hyperplasia (BPH)

2. Prostate Cancer

b. Indicate three modalities for management

1. Conservative measure include watchful waiting

. Medical therapy: α-Adrenergic Blockers, 5α-reductase inhibitor,

Physiotherapy

3. Interventional measures includes Transurethral resection of the prostate (TURP) and Open prostatectomy

c. List four complications that may supervene from operative management

Complications of open prostatectomy

1. Hemorrhage

2. Wound infection.

3. Vesico-cutaneous fistula

4. Incontinence of urine

5. Impotence (erectile dysfunction)

6. Infertility

7. Deep vein thrombosis

Complications of TURP

1. Primary haemorrhage

2. Secondary haemorrhage

3. Urinary incontinence

4. Urethral stricture (US)

5. Sexual Dysfunction

3. A 45 year old man is seen at the emergency complaining of colicky abdominal pain of 36 hours duration and absolute constipation. He had vomited repeatedly and on examination he was moderately dehydrated with abdominal distension, and tenderness and some guarding over a lower midline incisional scar in the abdomen.

a. Indicate the precise diagnosis

b. What are the complications of the presentation

Diagnosis

Acute Mechanical Intestinal obstruction secondary to adhesion

complications

1. Perforation

2. Strangulation

3. Bowel necrosis

4. Septicaemia

5. Vomiting may result in aspiration pneumonitis

6. Shock

7. Dehydration.

8. Electrolyte and metabolic imbalance.

9. Peritonitis.

10. Renal failure

11. Respiratory failure, respiratory acidosis from distension of the abdomen.

12. Multiple organ failure.

b. State three principal procedures essentials for safe management of this patient

1. Intravenous fluid and electrolyte therapy

2. Nasogastric decompression

3. Intravenous antibiotics

c. List four immediate complication of management

Complications of conservative treatment

1. Strangulation

2. Open perforation

3. Fluid overload

4. Infections

Others:

Sepsis

Ischemic Necrosis

Postoperative Complications of Resection of Intestine

1. Adhesions.

2. Paralytic ileus

3. Peritonitis

4. Intra-abdominal abscess

6. Entero-cutaneous fistula

D. Management:

1. Admit, Nil per oral

2. Pass a nasogastric tube

3. Set a line, take blood for grouping and cross-matching, full blood count,BUN:CR, electrolytes,

4. Start intravenous fluids ,antibiotics,analgesic

5. Pass urethral catheter and monitor the urine output

6. Careful observation

- **Half-hourly pulse and blood pressure monitoring**
- **Frequent clinical re-assessment**

E. Differential of Acute Intestinal Obstruction

1. Paralytic ileus

2. Acute appendicitis

3. Typhoid perforation

4. Severe constipation

4. A 35 year old man presents with severe pains in the buttock with fever and rigors of three days duration. On rectal examination, he is tender to the right of the anus with a swelling

a. What is the clinical diagnosis?

Anorectal Abscess

b. Name four diagnostic features

1. Severe anal or perianal pain

2. Swelling, induration or redness may be seen

3. Difficulty in defecation

4. Fever and rigors

d. List four complications that may supervene

1. Perianal fistula

2. Cellulitis

3. Sepsis

4. Hemorrhage

5. An 8-year old boy is brought to the casualty complaining of severe pain around the right elbow region following a fall on the outstretched hand. Tenderness and crepitus are elicited in the elbow region.

a. What is your clinical diagnosis?

Supracondylar Humerus Fracture

b. Indicate how you would treat this injury

1. Undisplaced fractures in children require an above- elbow plaster for three weeks.

2. When fragments are displaced, manipulative reduction under general anaesthesia should be undertaken.

3. Reduction may be done under an image intensifier and Kirschner wires passed through the skin to hold the fracture reduced. Above-elbow POP is then applied. The Kirschner wires are pulled out after 2 weeks

4. Open reduction and internal fixation are done if closed reduction fails.

c. Give two serious complications that may occur

1. Nerve injury incidence is high (radial, median, and ulnar nerve)

2. Vascular injury / compromise

3. Compartment syndrome

4. Volkmann ischemic contracture- rare, but dreaded complication

OBSTETRICS & GYNECOLOGY

1. A 21-year old, previously healthy, primiparous (a woman who has given birth once before) patient spontaneously delivered a 3500gm baby four days ago. A right medio-lateral episiotomy was performed under local anesthesia. Two days ago, she developed a temperature of 39degree celcius and oral ampicillin was started. The patient now appears ill and dehydrated. She has a persisting fever and increasing episiotomy wound pain. The perineum is erythematous, extremely tender and oedematous. In the past 36 hours the oedema has extended to the right medial thigh and lower abdominal wall. Her temperature is 39.4 degree celcius ; pulse is 130/min, respiration 35/min, and blood pressure 100/60mmHg. Haematocrit is 48%, leukocyte count is 32,000/mm3. Serum

calciumlevel is low and findings on urinalysis are normal.

a. What is your diagnosis?

Puerperal Sepsis secondary to Episiotomy wound infection.

b. How will you treat this patient?

1) Admit, set a line, take blood for laboratory work(Full blood count, Bun:cr, ESR, CRP)

2) Intravenous Antibiotics

3) Intravenous Fluids

4) Administer Analgesics.

e.g. IM Pethidine 100mg 6-8 hourly

2.A 26 year old nulliparous woman (a woman who has never given birth / a woman who has never completed a pregnancy beyond 20 weeks / a woman in her first pregnancy and who has therefore not yet given birth) who has had amenorrhea for six weeks now has cramping lower abdominal pain and vaginal spotting(Bleeding).

a. Discuss the diagnosis, the differential diagnosis and the management.

Diagnosis: Ectopic Pregnancy

NB. A woman presenting with Amenorrhea + Abdominal Pain(before)+ vagina Bleeding, I will think

Ectopic Pregnancy until proven otherwise.

But if a woman presents with Amenorrhea + vagina bleeding(before) + abdominal pain , think of abortion until proven otherwise.

Differentials :

- **Adnexal Torsion**
- **Spontaneous Abortion**
- **Pelvic Inflammatory Disease (PID)**
- **Molar pregnancy**
- **Endometriosis**
- **Ruptured Ovarian Cyst**
- **Hemorrhagic Corpus Luteum**
- **Appendicitis**
- **Diverticulitis**
- **Urinary calculi**

Management:

Investigation:

(Diagnostic investigation)

Laparoscopy

- **Abdomino-pelvic ultrasound**
- **Serum beta-HCG**

(Supportive investigation)

Full blood count

Clotting profile

Culdocentesis

Treatment:

1.Airway, breathing and Circulation ,set a line and take blood for lab work including grouping and cross-matching, give iv fluids and pass a urethral catheter.

2.Give tranesamic acid to stop bleeding.

3. Blood transfusion if patient is hemodynamically unstable.

4. A patient with ruptured Ectopic will need immediate surgery(laparotomy).

5. Patients with non-ruptured Ectopic will be admitted and definitive treatment may be done operatively by laparoscopy or with methotrexate.

6. Stable patients with progressive decreasing in BHCG level is observed closely with regular BHCG check to assess continuous decline in the level.

3.A 30 year old G3P2+0 undergoes a spontaneous vaginal delivery of a healthy 3.3kg boy. After 10 minutes without spontaneous placental delivery, traction is applied to the umbilical cord. Placental tissue is expelled with the cord, but vaginal bleeding follows immediately. The placenta is clearly not complete.

a. What is the most likely diagnosis?

- **Primary Post-Partum Hemorrhage secondary to retained placenta.**

b. How would you manage this case?

- **NB; Treatment goals:**
- **To arrest the bleeding**
- **To restore the volume**

1. CALL FOR HELP, rapid uterine massage, give nasal oxygen.

3. Set 2 large bore cannular, take blood for grouping and cross-matching,full blood count, Bun:Cr and clotting profile, do an abdomino-pelvic ultrasound

and monitor the blood pressure.

4. Give IV infusion of 20units oxytocin in 500ml of normal saline.

5. Insert a urethral catheter to empty the bladder.

6. Manual exploration and evacuation of the uterine cavity for retained placental fragments

8. Prophylactic antibiotics

4. A 31 year old G4P1+2 who is approximately 34 weeks pregnant complains of bright red vaginal bleeding and some cramps for the last hour.

a. What are the possible diagnoses?

- **Abruptio placenta**
- **Placenta previa**
- **Vasa previa**
- **Uterine rupture**

Other causes:

- **Heavy show**
- **Cancer of the cervix**

b. What can be learned from a sonographic examination of this pregnancy?

1. Ultrasound findings may show a retroperitoneal clot suggestive of Abruptio placenta.

2. It may also show an abnormally positioned placenta (Low uterine segment placental implantation) which is diagnostic of placenta previa.

- **Placenta covers the cervical os – Total Previa**
- **Placenta extends to the margin of the os – Marginal Previa**
- **Placenta is in the close proximity to the os – Low-lying Previa**

5. A 16 year old girl is brought by her mother for evaluation because she had never menstruated.

a. What is the normal sequence in secondary sexual maturation?

1. Thelarche (Breast Development) – 9 to 10 years

2. Adrenarche (Pubic and Axillary hair) – 10 to 11 years

3. Maximum Growth spurt – 11 to 12 years

4. Menarche (Onset of first menses) – 12 to 13 years

b. What are the causes of delayed menarche?

1. Anatomic cause:

- **Vaginal agenesis/septum**
- **Imperforate Hymen**
- **Müllerian Agenesis**

2. Hormonal

- **Gonadal Dysgenesis (Turner syndrome)**
- **Hypothalamic-pituitary insufficiency**
-

PEDIATRICS

1. A six year old girl is brought to the emergency room in coma. She looks dehydrated and has deep breathing with sweet scent on her breath. She is said to have lost a lot of weight over the last week. There is no history of diarrhea.

a) What is the likely diagnosis?

Diabetic ketoacidosis (DKA)

b) Name two tests at the bedside that would help you arrive at the likely diagnosis.

1. Finger prick blood glucose test

2. Urine Ketones

c) What two steps will you take immediately?

- **Give nasal oxygen and rehydrate with Intravenous 0.9% normal saline**
- **Give soluble insulin**

2. A six month old boy is rushed to the hospital with a high fever. On the way, he convulses briefly. He is still lucid on arrival.

a. Name two differential diagnoses

1. Febrile seizure

2. Severe(Cerebral Malaria)

Others:

Pediatric Meningitis

Pediatric Encephalitis

b. Name two important signs you would look for.

Signs of dehydration:

- **No tears**
- **Dry skin and mucosal surfaces**
- **Stiff neck**
- **Bulging fontanel,**
- **Unequal pupils, rigid posture (signs of raised ICP)**

c. How would you treat one of your diagnoses?

General treatment for the High fever

1. Sponge the child with room-temperature water to reduce the fever

Simple Febrile convulsion

1. Counseling and reassurance to parents.

2. Antipyretics e.g. acetaminophen to reduce temperature, tepid baths

3. Find and treat the underlying cause.

Cerebral Malaria:

1. Prevent Hypoglycemia and dehydration, give IV dextrose saline and normal saline.

2. Nurse on the side to prevent aspiration.

3. Quinine IV or IM , or Artemether IM.

Meningitis

1. Admit.

2. Start Early empiric antibiotic therapy - Ceftriaxone IV

3. IV Dexamethasone.

4. Monitor vital signs, urine output, and mental status for evidence of shock.

5. Urine output and serum electrolytes should be monitored.

8. Regular neurological evaluation.

3.A full term 3400 gram male infant is noted to be cyanosed six hours after birth.

a. What four signs will you elicit as you examine the patient?

1. Poor sucking

2. Poor crying

3. Heart murmurs

4. Tachycardia

5. Tachypnea

b. What investigations will you request?

1. FBC

2. Serum electrolytes

3. Serum glucose

4. Arterial blood gas

5. Chest x-rays

6. Blood cultures

7. ECG

8. Echocardiogram

c. Name two differential diagnoses

1. Birth asphyxia

2. The “5 Ts” of Cyanoticcongenital heart diesase

- **Tetralogy of Fallot**
- **Transposition of the great vessels**
- **Truncus arteriosis**
- **Total anomalous pulmonary venous return**
- **Tricuspid atresia**

3. Meconium aspiration

4. Pulmonary hypoplasia

5. Respiratory distress syndrome

4. A young girl presents to the Out Patient Department with a papular vesicular and pustular lesions which started on her trunk and has spread to the extremities.

a. What is the likely diagnosis?

Chicken Pox (Varicella-zoster virus)

b. What other complaints may she have? Name two.

1. Intense Itching

2. Pain

others

Anorexia (Loss of appetite)

Mild headache

Fever and malaise

c. How would you treat her?

Non pharmacological

Avoid or reduce scratching

Keep hands clean and nails cut short

Regular bathing with soap and water

Pharmacological

To relieve the intense itching

- **Calamine lotion, topical**
- **Antihistamine, oral**
- **Treat pain and fever with oral analgesic**
- **Prevent or treat secondary infection with antibiotics**

5. A 2 year old boy is rushed to your clinic with severe pallor.

a. Name 2 other signs he will have.

1. Tachypnea (Rapid breathing)

2. Marked jaundice

3. Sweating

4. Haemoglobinuria (dark or 'cola-coloured' urine)

5. Crepitations on chest examination

6. Hyperpyrexia (axilliary temperature > 38.5 ° C)

7. Circulatory collapse or shock (cold limbs, weak rapid pulse)

8. Oliguria

9. Altered consciousness

B. Give 2 possible causes of his severe anemia

1. Infections – esp. Malaria

2. Hemolysis – e.g. SCD, G6PD deficiency

Others:

Bone marrow dysfunction

Hookworm infestation

Iron deficiency Anemia – eg. In malnutrition, Post malaria

c. Name 2 possible complications that might follow.

1. Coma(Cerebral malaria)

2. Hypoglycemia

Others:

Renal Failure

Respiratory distress (Acidosis)

d. How would you manage this child after the history and physical examination?

1. Need to investigate the cause, e.g. Hemoglobin, full blood count, BUE:CR, Blood for Malaria parasites, Hb electrophoresis, G6PD, stool routine examination.

2. Urgent blood for grouping and cross matching

3. Prop up child

4. Give oxygen

5. If cardiac failure is imminent give IV diuretics

6. Blood Transfusion

7. Antimalarial course - IV Quinine

PUBLIC HEALTH

1. In September 1973, a visitor to Ghana complained of haematuria and ova of S.haematobium were found in his urine. He recalled visiting Lake Bosomtwe in January and Akosombo in the previous week. At both places he was in contact with suspicious pools of water.

a. Specify the most likely place of infection

Lake Bosomtwe

b. Which age group in the village visited is more likely to have the disease?

10 – 17 years

c. List the measures you would take to manage an outbreak of the disease in the village?

1. Elimination of the reservoir: chemotherapy; Praziquantel

2. Elimination of the intermediate snail host;

3. Prevention of human contact with infected water;

4. Health education;

2. You have received a report of an outbreak of cholera in a village of a

thousand people

a. List the steps you would take to investigate and control the outbreak

1. Diagnosis, isolation, notification and antibiotics

2. Search for source of infection

3. Concurrent and terminal disinfection

4. Environmental sanitation

5. Health education; personal hygiene

6. International co-operation

b. List the measures you would institute to prevent a recurrence of such an outbreak

1. Preventive Measures such as

- **Enforcement of basic principles of sanitation**
- **Provision of potable water and Good sewage disposal**
- **Continuing health education: Personal Hygiene, Hand washing**

2. Control of case e.g. quarantine travelers with disease

3. Control of contacts e.g. Observation for 5 days

4. Control of Environment e.g. cleaning of hospital rooms and equipment.

3.A 25 year old mother presents a child aged 5 years with genus valgus (severe bow-leggedness) deformity and pigeon chest and kyphoscoliosis and history of one year of generalized weakness and poor appetite

a. What will be your provisional diagnosis?

Rickets

b. What additional information will you need to confirm your diagnosis?

1. Dietary history

2. History of dental problems

3. Tenderness or pain in the bones, rather than in the joints on physical examination

4. Serum calcium

5. Bone X-rays

c. What is the likely cause of this disease?

Vitamin D deficiency

d. How should this condition be managed?

Investigation

Diagnostic Investigation

X-ray of the bone, serum calcium

Supportive Investigation

Full blood count, BUN:CR, electrolytes, parathyroid level,GFR, Urinalysis

Treatment

Non pharmacological

Encourage exposure to moderate amounts of sunlight.

Educate mum on balanced diet.

Some skeletal deformities may require corrective surgery

Pharmacological

Vitamin D and calcium supplementation

4. A fisherman moved his family in-land to engage in subsistent farming following a long period of unsuccessful fishing farming career. Their diet was changed from fish and meat to largely carbohydrate diet. The receiving village did not have satisfactory sanitary facilities. Meanwhile, in the village people use human faeces as manure, and towards the second year, he noticed that his wife and children were feeling weak and looked pale. At the clinic they diagnosed as having anaemia.

a. What are the likely causes of the anaemia?

1. Micronutrient and vitamin deficiency: Iron, Folic acid, B 12 vitamin

2. Infestations e.g. hookworm, tape worm, Schistosomiasis, whipworms

b. Indicate how these caused the anaemia

1. Malnutrition by this family will lead to deficiencies in micronutrient and vitamin which will eventually lead to anemia

2. The various worm infestations as a result of improper sanitary conditions and use of human manure will lead to iron deficiency by the sucking of blood by hookworm in the intestine resulting in anemia.

c. How would you treat the causes identified?

Non pharmacological

1. Advise on a balanced diet.

2. Stop using human faeces as manure

Pharmacological

1. Eliminate the worms with anti-helminthic(Mebendazole)

2. Give hematenics

5. During child welfare in a community, you see a 14-month old baby who developed a fever, cough, diarrhea, and running nose, followed 3 days later by a maculo-papular rash.

a. What is the most likely diagnosis?

Measles

b. What is the incubation period of the disease?

10 – 14 days

c. How is the disease transmitted?

Droplet spray, air-borne or contact with fluids from an infected person's nose and mouth.

d. How would you prevent other children from contracting the disease?

1. Immunization with measles vaccine.

2. Control of sources of infections.

3. Interrupt the ways of transmission by avoiding contact with infected patients.

4. Health education on how disease is spread and importance of immunization.

MEDICINE

1. A man noticed 6-month duration of abdominal swelling and early morning facial puffiness which resolves as the day goes by.

a. Name two other symptoms he could have.

1 difficulty in breathing

2 abdominal pain

b. What are the differential diagnosis of the diagnosis:

1 Chronic kidney disease

2 Acute kidney injury

3 Glomerulonephritis

4 Diabetic Nephropathy

C. What's the diagnosis. Two other signs you could elicit on physical examination

Diagnosis - Nephrotic syndrome

Signs

1 ascitis

2 peripheral Edema

d. What investigation will you perform

1. urine dipstick; proteins will be present

2. abdominal ultrasound for ascites

3. serum cholesterol will be elevated

2. A man on furosemide suddenly develops a sharp pain at the metatarso phalangeal joint

a. What is the diagnosis?

Acute Gout

b. What's the acute management of the condition?

1. Admit and advice rest to the affected leg.

2. Use Non-steroidal anti-inflammatory drugs (NSAIDs) for pain relieve.

c. What's the long term management of the condition?

1. Advice to stop or reduce intake of alcohol and red meat.

2. Give allopurinol.

3. A man has been diagnosed of chronic kidney disease and serum potassium

measured 7mmol/l.

a. What are the ECG findings in hyperkalemia?

1 Peaked T waves

2 Prolonged PR interval

3 Decreased or disappearing P wave

4 Widening of the QRS

b. How will you manage hyperkalemia

1. IV calcium gluconate for cardio protection

2 IV glucose and insulin infusion to enhance potassium uptake by cells

3 Correct severe metabolic acidosis with sodium bicarbonate

4 Nebulise salbutamol

5 gastrointestinal cation-exchange medications

8 Emergency dialysis for patients with potentially lethal hyperkalemia that is unresponsive to more conservative measures or with complete renal failure

C. What complications can the man suffer?

1 cardiac arrhythmias

2 ventricular fibrillation

3 Metabolic Acidosis

4 Muscle weakness

d. Indications for hemodialysis

AEIOU

1 "A"- acidosis;(metabolic acidosis, respiratory acidosis, diabetic keto acidosis)

2 "E"- electrolyte disarray (K+, Na+);

3 "I" - intoxicants (alcohol);

4 "O"- fluid overload;(congestive heart failure)

5 "U"- uremic symptoms (nausea, seizure, pericarditis, bleeding).

4. A man of 70yrs was in the room when suddenly her daughter heard a loud noise and

rushed to the room only to find him unable to speak and lying on the floor.

A. what is the diagnosis?

Cerebral vascular accident

B. What are the risk factors for this patient

1 Age

2 Race

3 Physical inactivity

4 High blood pressure

5 Diabetes

6 hyperlipidemia

C. what 2 pathophysiological states could the man be in

1 Ischemic stroke

2 Hemorrhagic stroke

D. what questions will you ask her daughter to help make a diagnosis

1 If the patient has hypertension and diabetes

2 If the patient drinks alcohol or smoke

3 If the patient has had any previous stroke

5. A woman was brought to the emergency room with complaints of severe vomiting and dark pigmentation on her skin;face and palmar creases. She looked weak and lethargic and her bp on arrival was 70/40mmhg

a. What's the diagnosis

Addisonian crisis

b. What investigation will you perform to confirm diagnosis.

cortisol or adrenocorticotropic hormone (ACTH) test

c. Mention 2 causes of this condition

1. Severe infections

2. Suddenly stopping the usage of exogenous steroids

d. How will you manage her?

1. Admit, Airway, Breathing, Circulation

2. Set a line and give IV fluid

3. Give IV Hydrocortisone

4. Monitor vitals regularly

NEW UPDATE

- Effective 2022, only candidates from institutions recognized by the Council would be admitted to the Council's registration examination.
- Effective 2022 the registration examination will consist of : Stage 1 MCQ, Stage 2 clinical (OSCE) and Orals.
- Effective 2025 only candidates with science background with minimum of a credit in all subjects from SSCE / WASSCE would be eligible for admission to the Council examination.

Visit the Council's website for more details**, www.mdcghana.org**

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RECOMMENDATION

I recommend this guide to all those in medical school and those preparing for the Ghana Medical and Dental Council examination.

CONCLUSION

It is my hope that this guide goes a long way to help students get enlightened and prepare adequately towards the Ghana Medical and Dental Council Examination.

I value your feedback.

You can send me your emails through **awedam35@yahoo.com** or you can follow me on Instagram; **dr.dennisachio** for more updates

All the best in your exams.

About the Author

Dennis Awedam Achio is a medical doctor, an old student of Pope John Senior High School and Minor Seminary who had his medical training in China and has passed the Ghana Medical Council Examination.

He has served in various leadership positions: President of Koforidua Diocesan Catholic Students' Union, Leader of medical class batch, NUGS-HUNAN General Secretary, NUGS-CHINA National General Secretary, NUGS-CHINA Acting National President. He has passion for reading, finding solutions to problems and motivating the youth. It is his hope that this book enlightens and guides many students preparing for the Ghana Medical Council Examination.

About the Book

This book is written by the author based on his experience and his zeal to inspire and guide all candidates preparing for the Ghana Medical Examination. It highlights mistakes made by candidates, how to approach clinical cases, how to go about with registration for the examination, experiences and advice from colleagues and sample questions with answers.

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