



Practical Activity Book

By

Staff Members of Public Health and
Community Medicine Department

Photo

Student's Name:

E-mail Address:

Serial Number:

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Round Number:

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Group:

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Department Stamp

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Vision

Promotion of Outstanding Programs of Medical Care to Serve Society & to
Promote Environmental Development

Mission

Development of an Outstanding, Honorable Practitioner, Capable of Providing
International Standards of Medical Care & Following Medical Ethics

Preface

Dear students,

The Practical Activity Book is a guide for the fourth year medical students to enhance the specific skills and/or knowledge which should be acquired from careful reading & study of the assignments.

It constitutes an outline which initially conveys the major points or target areas of **The Public Health & Community Medicine** to be studied. Then, after the course is completed, the objectives serve as a review & check for the students, who can use them to determine if sufficient gains have been made in skills and/or understanding.

Practice exercises & solving problems are included within each topic to help students to apply the topic content. Answers to these exercises are valuable study guides for the final examination.

It is our sincere hope that you will find this work to be a profitable & satisfying one. We seek your constructive criticism at all times & ask that you let us know whenever you have problems or need assistance. We shall follow your progress with keen interest.

Head of the Department

Prof. Mohamed Azmy Khafagy

Curriculum Content

Public Health & Community Medicine Course:

- **Lecture:** 128 hours
- **Tutorial:** 10 hours
- **Practical:** 54 hours

Academic Teaching Material:

1. Principles of Communicable Diseases Studies
2. Epidemiology of Some Selected Communicable Diseases
3. Epidemiology of Some Selected Non-communicable Diseases
4. Principles of Health Care Management
5. Management of Specific Health Care Services
6. Communication, Health Behavior, & Health Education
7. Environmental Health
8. Occupational Medicine
9. Nutrition
10. Research & Medical Statistics

Tutorial & Practical Material:

1. Epidemiologic Methods
2. Measurements of Health
3. Medical Statistics
4. Communication & Health Behavior
5. Health Education
6. Investigation of an Outbreak
7. Prevention & Control of an Outbreak
8. Epidemiology of Some Selected Communicable Diseases
9. Blood Bank
10. Health Care Management
11. Health Care Quality Management
12. Primary Health Care Services
13. Occupational Health
14. Water & Health
15. Nutrition in Health & Disease

Intended Learning Outcomes of Course (ILOs)

[1] Knowledge & Understanding:

1. Understand the epidemiology & determinants of communicable & non-communicable life threatening illnesses affecting the body & each of its major organ systems, presenting throughout the age spectrum.
2. Identify the prevalent health problems in a community, using various epidemiological strategies.
3. Recognize trends in health & disease.
4. Enumerate & interpret behavioral & social variables impacting health & disease.
5. Identify the risk factors, principles of disease prevention & early detection of common community health problems including nutritional, occupational & environmental health related problems.
6. Get insights concerning the principle & organization of National Health Care System.
7. Recognize epidemiological principles of demography & biological variability.
8. List the principles of disease surveillance & screening.
9. Understand communicable disease control & health promotion.
10. How to utilize the population-based approaches to health care services & their role in improving medical practice.

[2] Intellectual Skills:

1. Design prevention & control programs for communicable & non-communicable health problem of special public concern.
2. Select & use appropriate health education methods & materials.
3. Apply risk assessment methodology to diverse of health problems & or injuries, to determine strategies for appropriate response.
4. Evaluate relevant & current data from literature, using information technologies & library resources, in order to help solve a clinical problem based on evidence (EBM).
5. Apply research & statistical methods in studying health problems of public concern
6. Formulation of research questions that is pertinent to medicine.
7. Precisely collect, analyze & interpret medical data.

[3] Professional skills:

1. Adopt suitable measures for prevention & control of communicable & non-communicable diseases.
2. Utilize communication skills & health education messages in patient care & apply appropriate infection prevention practices/ universal precautions.

[4] General & Transferable Skills:

1. Use information & communication technology effectively in the field of public health & preventive medicine.
2. Retrieve, manage, & manipulate information by all means, including electronic means.
3. Present information related to public health problems clearly in written, electronic & oral forms.
4. Communicate ideas & arguments effectively.
5. Work effectively within a team, respect patients, their relatives, senior & other colleagues involved in his teaching & subsequently in his future practice.
6. Analyze & use numerical data including the use of simple statistical methods & evaluate indicators of health & disease.
7. Evaluate their work & that of others using constructive feedback.

Method of Assessment:

1. **End of Round:** 60 marks
 - Pratical book activities 6 marks
 - Continuous assessment (Quizzes) 14 marks
 - Round MCQ & Multistations exam..... 40 marks
2. **Final Written exam (2papers):** 150 marks
 - Time of written exam: (1.5 hour/ paper)
 - Type of written exam: short essay questions
3. **Final Oral Exam:** 30 marks
4. **Final MCQ Exam:** 60 marks

Total (300 marks)

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3. Hospital Statistics

Answer the following exercises:

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6. Communication & Health Education

Answer the following exercises:

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7. Investigation of an Outbreak

Answer the following exercises:

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8.3 Diarrheal Diseases

Answer the following exercises:

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8.4 Infection Control Measures

1. How many steps of proper hand washing?

2. When should I wash my hands with water & soap?

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3. Proper duration of washing your hands with water & soap is.....and If you will use alcohol based hand rub is.....

4. Regular waste should be disposed incolored bags

5. Infected waste will be disposed in colored bags.

6. Human tissues & placenta will be disposed incolored bags

1. Example of sharps:

2. If you have to do recapping, you will use

3. Standard precautions of isolation applied to

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Types of transmission based isolation precautions

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Examples of diseases need air borne precautions

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Sharp containers should be disposed iffull.

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12. Expanded Program on Immunization (EPI)

Answer the following exercises.

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13. Occupational Health

13.1 Occupational Devices

SPIROMETER



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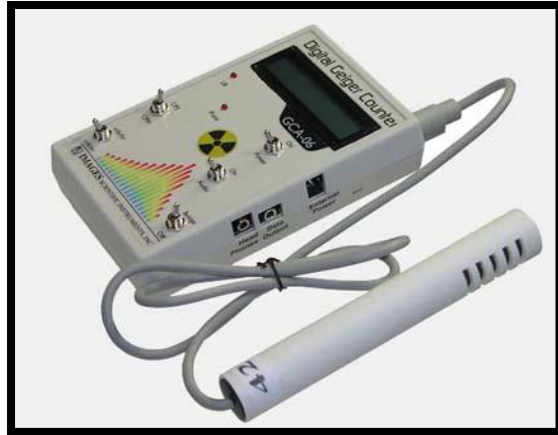
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13.2 Personal Protective Equipment (PPE)

I. Eye protection



A



B



C

Name of equipment:

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Indications for use:

1.
2.
3.

II. Head protection

Indications for use:

1.
2.
3.



Requirements:

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Structure:

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III. Hand & arm protection



Name of instrument:

Indications for use:

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IV. Body protection



Name of instrument:

a.

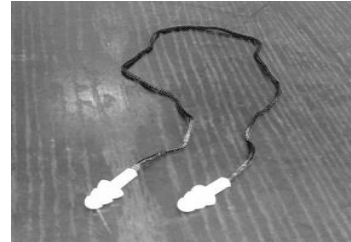
b.

Indications for use:

1.
2.

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V. Hearing protection



Name of equipment:

A.

B.

Indications for use:

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VI. Respiratory protection



Name of equipment:

A.

B.

Indications for use:

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Date of session: / / 20

14. Water & Health

Answer the following exercises.

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Date of session: / / 20

16. Nutrition in Health & Disease
Assessment of the Nutritional Status

Answer the following exercises.

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17. Surveillance for NCDs

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Student Field Visit Forms

Date of session: / / 20

Visit Form

Tuberculosis (Chest Hospital)

1. Comment on the following items of hospital design:

1.1 Site of the building Suitable Not suitable

1.2 Number of departments

1.3 Are the inpatient services in a separate building from outpatient?

YES NO

2. What are diseases treated by & admitted to chest hospital during your visit?

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3. What are the preventive measures applied for different respiratory diseases?

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.....

4. Is **BCG** vaccine available in the hospital? YES NO

- Target groups for **BCG** vaccination are:

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.....

5. Is there a health education message given to patients with chest disease in general & TB patient in particular? YES NO

If yes, what is it?

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6. Is there screening test done for detection of T.B? YES NO

If yes, what is it?

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7. Steps done to confirm the diagnosis of T.B

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8. What are the most common findings in X-ray of T.B patients?

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9. Concerning **Tuberculin test**, complete the following:

1. Indications of the test:

- | | |
|--------|--------|
| a..... | c..... |
| b..... | d..... |

2. Interpretation of the test:

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10. What is meant by **DOTS** strategy? Is it practically applied?

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11. What are the available anti-TB drugs in the hospital?

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12. What are the methods used for sputum disinfection in chest hospital?

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13. What are the discharge criteria of a T.B patient from chest hospital?

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Tutor Signature

Date of session: / / 20

Visit Form

Blood Bank

1. What are the duties of the blood bank?

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2. What is meant by provision of safe effective blood & blood products?

-Safe blood/ products is

-Effective blood/ products is

3. Comment on the following items of blood bank structure:

Item		Present	Absent
Structure:	Suitable site		
	Special departments		
	Toilet for staff		
	Toilet for patients		
	Vehicles		
	Communication equipment (Telephone, Fax. E-mail)		
	Cafeteria		
	Conference hall (seminar)		
	Stores		
	Incinerator		
	Central air conditioners		
	Generators (Emergency power supply		
	Safety measures for fire		
	Refrigerators for Blood Storage		
	Audible alarm system in refrigerator		
	Autoclave with temp. & pressure display		
Manpower:	Medical Officer Manager		
	Doctors		
	Staff Nurses		
	Lab Technician		
	Administrative Staff		
	Drivers		
	Recruiters		
	Medical registers		
	Cleaning workers		
Departments (services)			
Donation department			
	Donor education/ motivation material		
	Donors beds, chairs ,tables		
	Recovery bed for donors		

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Donor record details: (Age, Interval between donations, Viral infection, History of chronic diseases, Transfusion history)			
Privacy for medical examination of donor (Weight, Haemoglobin, BP, Pulse)			
Pediatric Bags			
<u>Serology department</u>	Hepatitis & HIV tests		
	Syphilis test		
	Malaria test		
	Informing donors in case of +ve results		
	Followed up of HbsAg/ HIV +ve donors		
<u>Components department:</u>	Air-conditioned Blood component room		
	Well lighted Blood component room		
	Separation of blood components to Packed RBC, platelets concentrates & fresh Frozen Plasma		
<u>Quality control department:</u>			
Quality control procedure for supplies & reagents			
Internal audit			
<u>Issuing department:</u>	Waiting area clean & ventilated		
	Emergency stock		
	Medical report required for issuing		
<u>Therapeutic unit department:</u>			
Blood transfusion for haemophilia & thalassemia patients			
<u>Storage</u>			
Blood storage refrigerators			
Recorded thermographs preserved with dates			
Safe transport the blood to outside hospital/ blood bank			
Reuse the returned bottle			
<u>Outdoor camps</u> Average number of camps held per month			
Proof sanitary conditions of camps			
<u>Infection control measures</u>			
Source for clean water for routine hand washing			
Soap for routine hand washing			
Use of bleaching solutions			
Use of personal protective barriers			
Bags for non medical waste collection			
Colored bags for medical waste collection			
Disposal of sharps in sharp containers			
Bio-medical waste pits set up/ functional			
Incinerator			
pre-employment vaccination with Hepatitis B vaccine			
Protocol for needle sticks injury			

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Date of session: / / 20

Visit Form

Occupational Health Hazards of Nitrogenous Fertilizer Industry

a. Collection of data:

1. Site of the factory
2. Relation to the residential area.....
3. Departments, number of workers & their gender distribution:

Department	Number of workers in each department	Male	Female

4. Materials used in the factory:
 - Raw materials
 - Intermediate/ by- products
 - End products
 - Waste disposal methods

5. Are there safety records? YES NO

6. Are there medical records? YES NO

7. Occupational health team in the factory:

.....

b. Observe the following:

1- The working environment for the following:

- Gases & vapors YES NO
- Dust YES NO
- Abnormal odors YES NO
- Noise YES NO
- Adequacy of illumination YES NO
- High/ low temperature YES NO
- Environmental sanitation & cleanliness YES NO
- Washing facilities YES NO

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2- The workers practice:

- Eating/ drinking/smoking while working [] YES [] NO
- Workers unsafe practice [] YES [] NO

3- Workers compliance with personal protective equipment:

- [] Hard hat [] Safety shoes
- [] Goggles [] Safety spectacles
- [] Hearing protectors [] Respiratory protection
- [] Overalls [] Gloves

4- The safety measures:

- Warning & labeling aids [] Present [] Absent
- Firefighting equipment [] Present [] Absent
- 1st aid boxes & emergency measures [] Present [] Absent

c. Evaluate the possible health hazards

- Environmental monitoring (hazard assessment):

Hazard	Monitoring method
Air borne chemicals	
Noise	
Ionizing radiation	
Vibration	
Heat stress	
Humidity	

- Accidents/ Injuries:

- Common Types of accidents occur among workers.....
- Number of accidents in the last 6 months
- Average number of days lost in the last 6 months

d. Analysis of the results: At the end of your visit, what are the possible occupational health hazards in the workplace?

- Physical
- Chemical
- 3. Mechanical
- 4. Psychological.....

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Date of session: / / 20

Visit Form

Water & Health (Water Purification Station)

According to your visit to the station, answer the following:

- The site of water intake is characterized by:
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- The material used in coagulation is in a dose of in order to.....
- The type of filters used is
- The type of disinfectant used is in a dose of.....
- What are the tests done for water before distribution?

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How often are these tests done?

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If the sample from potable water shows positive **coliform test**,

-It indicates

- The possible cause is

- The measures done for this water are

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Date of session: / / 20

Visit Form

Preventive Medicine Administration

- 1. Enumerate the sectors of preventive medicine in Dakahleya Governorate:**
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- 2. Mention three measures done by food supervision & monitoring in preventive medicine administration:**
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- 3. Mention three measures for prevention & control of environmental pollution within the last year 2012.**
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- 4. What are the objectives of surveillance system in Egypt?**
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- 5. What are types of surveillance? Give example for each type.**
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- 6. Give example for disease eradicated in Egypt & last case of disease occurrence**
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- 7. A case of acute flaccid paralysis (AFP) appeared in Aswan in 3 years boy & the central office of preventive medicine in Egyptian ministry of health & population were notified by fax in the same day**

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What are emergency responding plan for such as case?

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8. The environmental protection team has taken a water sample from sewage in small village near Giza governorate during routine monitoring of water supply sources. The central & district laboratory reported positive water sample for wild strain type III of poliomyelitis virus that is not commonly found in Egypt.

What are the measures done for disinfection of water & prevention for current threat?

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9. What is the recommended frequency of notifiable diseases reporting in Egypt? Give examples.

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10. Are there any new vaccinations planned to be added to EPI in Egypt for under five children in near future?

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Date of session: / / 20

Visit Form

Malaria Control Unit

According to your field visit, answer the questions you have:

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Visit Form

Family Health Unit

Check the appropriate choice:

Manpower:			Physical Examination		
Medical Staff	Present	Absent	Urine analysis, Hb, Blood Group, RH Factor		
G.P			Pre-Natal Care: Periodic Visits		
Family Medicine Specialist			General Condition	Present	Absent
Internal Medicine			Body Weight		
Pediatrician			Blood Pressure		
Obs-Gyn Specialist			Hemoglobin		
Surgeon			Albumin & sugar		
Anesthetist			Obstetric Examination, US		
Dentist			Pre-Natal Care: Health Education		
Staff Nurses			Personal Hygiene	Present	Absent
Allied Medical Staff	Present	Absent	Nutrition		
Lab Technician			Child Care & Breast feeding		
X Ray Technician			Alarming signs		
Pharmacist			Referral of at risk cases		
Sanitarian			Administration of T.T		
Structure:	Present	Absent	Natal Care Service:	Present	Absent
Generator			Conducting normal deliveries		
Safe water supply			Referral of operative deliveries		
Toilet for staff			Post Natal Care Services	Present	Absent
Toilet for patients			Routine post natal exam.		
Refrigerator			Tender Calf Muscles exam.		
Blood bank			H.E on general cleanliness		
Ambulance			H.E. of breast feeding		
Maternal Health Care:	Present	Absent	H.E. of contraception method		
Pre-Natal Care: New Attendants			Family Planning Services	Present	Absent
Records for each client			IUD & hormonal methods		

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Laboratory Services			Mothers are informed about the time of next dose & session		
Hemogram	Yes	No	Cold Chain System		
BT/CT			thermometer inside refrigerator	Yes	No
Blood Sugar			temperature chart on door		
Blood grouping (RH typing)			temperature is recorded twice/d		
Blood Cross matching			Proper arrangement of vaccine		
Urine Albumin/ Urine Sugar /Urine Pregnancy test			water bottles on the shelves of the refrigerator door		
Sputum examination			Infection control measures:		
Referral Services	Yes	No	Segregation of waste	Yes	No
Referral linkages with urban health centers			Disposal of sharps		
Referral to higher centers			Statistic Presentation	Yes	No
Immunization Service:	Yes	No	Percentage of vaccinated children		
Health Team Knowledge			Percentage of pregnant females who were vaccinated against T.T		
Aware of contraindication of immunization			Percentage of drop-out children from doses of vaccination		
Know vaccines doses & method of administration			Plotting immunization coverage curve for different vaccines		
Know the concepts & importance of cold chain					
Immunization sessions				Yes	No
Vaccine vials are taken out from refrigerator at arrival of first child for immunization					
Vaccine vials are kept throughout the session in a container with ice					
Used & partially used vaccine are discarded at the end of the session					
Drop-out children are identified at the session end					
Recording during the session is done in child card & other related registers					
Vaccines are properly given in regards to dose ,site & method of administration					

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