

# DEPARTMENT OF COMMUNITY MEDICINE

S #	TEACHING FACULTY		
01	<b>PROFESSOR AND DEAN :</b> Prof. Khalida Naz Memon		
02	<b>PROFESSOR :</b> Prof. Muhammad Najeeb Memon		
03	<b>ASSOCIATE PROFESSORS AND CHAIRMAN:</b> Dr. Muhammad Ilyas Siddiqui		
04	Dr. Shazia Rahman Shaikh	05	Dr. Gulzar Usman
	<b>ASSISTANT PROFESSORS</b>	06	Dr. Suhail Ahmed Bajrani
07	Dr. Ambreen Sahito	08	Dr. Tariq Feroz
	<b>LECTURERS</b>	09	Dr. Jawad Ahmad Qadri
10	Dr. Wali Muhammad Nizamani	11	Dr. Faiza Memon
12	Dr. Zoheb Rafique Memon	13	Dr. Farah Deebea Shaikh
14	Dr. Sindhia Javed Junejo	15	Dr. Kanwal Naz
16	Dr. Rafaina Shah	17	Dr. Sindhu Almas
18	<b>HEALTH EDUCATION OFFICER:</b> Ms. QuratulAin		

## SUBJECT: COMMUNITY MEDICINE

### Session - I (LECTURES)

#### ➤ INTRODUCTION

1. Introduction to Community Medicine & Public Health.
2. Basic concepts about health. Health Indicators, Health Dimensions/determinants of health.
3. Health Delivery System of Pakistan.
4. Health policies & Health plans.
5. Natural history of diseases & Levels of prevention.

#### ➤ EPIDEMIOLOGY & RESEARCH METHODOLOGY

1. Introduction, Aims of Epidemiology, Uses of epidemiology.
2. Descriptive Epidemiology: Time distribution of diseases.
3. Descriptive Epidemiology: Place & Person distribution of diseases.
4. Epidemiological study designs/ Cross sectional studies/ Prevalence rate.
5. Introduction to Research Methodology.
6. Sampling techniques.
7. Medical Ethics: Background, Concept and Components
8. Analytical Epidemiology: Case control study & Odds ratio.
9. Analytical Epidemiology: Cohort study, incidence rate, relative risk & attributable risk.
10. Analytical Epidemiology: Experimental study.
11. Association & causation.
12. Investigation of an epidemic.
13. Surveillance.
14. Screening: Definition, types & Uses of screening.
15. Screening: Sensitivity, Specificity & Predictivity.

#### ➤ BIOSTATISTICS

1. Introduction to biostatistics, Health Management Information System (DHIS).
2. Types of variables/Methods of data presentation.
3. Rates, ratios & proportions.
4. Measures of central tendency.
5. Measures of dispersion.
6. Normal Distribution Curve (NDC).
7. Interpretation of data (t-test and Chi-square test).

➤ **MEDICAL DEMOGRAPHY**

1. Introduction, Population profile of Pakistan and Census
2. Population dynamics, size, composition, distribution, growth rate and Population doubling time.
3. Momentum of population, Population transition, Demographic trap & population pyramid.
4. Fertility measure & related statistics.
5. Mortality measures & related statistics: Infant mortality & maternal mortality rates.

➤ **FOOD & NUTRITION**

1. Nutritional problems of public health importance.
2. Malnutrition in less than 5 years age; in over 5 years.
3. Nutritional Requirements of children, adults, in pregnancy & lactation.
4. Assessment of Nutritional Status.

## **DEMONSTRATION CLASSES IN GROUPS**

➤ **INTRODUCTION**

1. Millennium Development Goals & Sustainable Development Goals.
2. Primary Health Care and Human Development Index (HDI).
3. Spectrum of health & Ice-berg phenomenon of diseases.
4. Non-Governmental organizations and International agencies.

➤ **RESEARCH METHODOLOGY**

1. How to write a research project.
2. How to design questionnaire
3. How to enter data in SPSS

➤ **FOOD & NUTRITION**

1. Macronutrient & micronutrient deficiencies.
2. Food surveillance: milk borne, meat borne & fish borne diseases.
3. Balanced diet and Dietary fibers & Dietary goals.
4. Food preservation, food fortification & food adulteration.
5. Food poisoning.

➤ **REPRODUCTIVE HEALTH & CHILD HEALTH PROBLEMS**

1. Safe Motherhood (Domiciliary & institutional care).
2. Family planning, scope and methods of family planning.
3. Maternal & Child Health (MCH), Role of Lady Health Workers (LHWs) & Lady Health Visitors (LHVs).
4. Antenatal, intranatal and postnatal care.
5. Neonatal care, growth and development of infant.
6. IMNCI: Overview - Community and Health System Component.
7. Adolescent Health

➤ **OCCUPATIONAL HEALTH**

1. Introduction to Occupational health hazards and organization of occupational health services.
2. Pneumoconiosis & its control measures.
3. Lead poisoning & its control measures.
4. Occupational health hazards for agricultural & industrial workers- Ergonomics.
5. Measures for prevention of occupational health hazards. Medical & Engineering methods.
6. Disaster classification, preparedness and management.

The students in groups will be assigned research projects under supervision of a faculty member. The Supervisors for each group will be notified and the students will be required to meet with the Supervisor for the project. The students will start the project work in Session – I and submit it by mid of Session – II. Each group will present the research work in the form of Oral/Poster presentation, which will be evaluated and graded. The marks of projects will be included in Annual examination. The guidelines for the project work and oral/poster presentations will be taught in introductory classes of Research Methodology. The guidelines will also be displayed on notice board in the department.

### **FIELD VISITS**

1. Industry and Social Security Hospital.
2. Regional training Center for family planning.
3. Primary school to assess the nutritional status of school children.
4. Basic Health Unit (BHU).
5. Rural Health Center (RHC).

### **SKILL LEARNING**

#### **(PROBLEM BASED LEARNING)**

1. To develop a Questionnaire for a Survey.
2. To calculate BMI & to classify obesity.
3. To do interpretation on growth charts.
4. How to make ORS & how to follow various plans of rehydration.

### **ROLE PLAYS ON HEALTH EDUCATION / COMMUNICATION**

#### **(PROBLEM BASED LEARNING)**

1. Role play on counseling the mother for proper weaning of her child.
2. Role play on Plan A & Plan B of rehydration.
3. Role play on counseling for using personal protective measure for prevention of occupational health hazards.

### **IMNCI HOUSEHOLD SURVEYS ON KEY FAMILY PRACTICES**

Two surveys will be conducted by students & facilitated by their group facilitators.

### **Session - II**

#### **(LECTURES)**

#### **➤ COMMUNICABLE DISEASES**

1. Introduction to Communicable diseases; basic concepts.
2. Chain of transmission & its role in infectious disease control.
3. Epidemiology & Control measures for Tuberculosis.
4. Epidemiology & Control measures for Poliomyelitis.
5. Epidemiology & Control measures for Malaria.
6. Epidemiology & Control measure for Leishmaniasis.
7. Epidemiology & Control measures for Hepatitis and injection safety.
8. Sexually Transmitted Diseases (STDs) & HIV/AIDS & their control measures.
9. Epidemiology & Control measures for Dengue fever.
10. Epidemiology & Control measure for Rabies.

11. Epidemiology & Control measures for Typhoid.

12. Droplet infections: Measles, mumps, rubella.

13. Droplet infections: Influenza.

➤ **EPIDEMIOLOGY OF NON-COMMUNICABLE DISEASES**

1. Introduction & National Action Program for Prevention & Control of Non-Communicable diseases & Health Promotion.

2. Epidemiology & Control measures for Hypertension & Coronary Heart Diseases.

3. Epidemiology & Control measures for Diabetes mellitus.

4. Epidemiology & Control measures for Cancers.

5. Epidemiology & Control measures for Accidents and Injuries.

6. Epidemiology & Control measures for Mental illnesses.

7. Epidemiology & Control measures for Obesity.

8. Epidemiology & Control measures for Acute Rheumatic fever.

➤ **ENVIRONMENTAL HEALTH**

**A. WATER**

1. Methods of purification of water.

2. World Health Organization (W.H.O) criteria for purification of water.

**B. AIR POLLUTION, GLOBAL WARMING & RADIATION**

**HAZARDS**

1. Sources & hazards of air pollution.

2. Global warming- its effects on human health & economy.

3. Radiation Hazards.

**C. DISPOSAL OF WASTE**

1. Introduction, Public health importance of waste, methods of collection & disposal of refuse.

2. Hospital waste management.

**D. MEDICAL ENTOMOLOGY**

1. Introduction, Winged insects of public health importance.

2. Wingless insects of public health importance.

3. Methods of control of Arthropods.

4. Prevention and Control of Parasitic diseases of Public health importance.

**. DEMONSTRATION CLASSES IN GROUPS**

➤ **COMMUNICABLE DISEASES**

1. An overview of infectious disease control programs in Pakistan.

2. Epidemiology & Control measure for Yellow fever.

3. Epidemiology & Control measures for Cholera & other diarrheal diseases.

4. Epidemiology & Control measure for Amebiasis.

5. Epidemiology & Control measure for Hookworm infestation.

6. Epidemiology & Control measure for Tetanus.

7. Droplet infections: Chicken pox.

8. Droplet infections: diphtheria, whooping cough.

9. Droplet infections: Meningitis.

➤ **IMMUNOLOGY & EXPANDED PROGRAM ON IMMUNIZATION (EPI)**

1. Active /passive immunity & Live/ killed vaccines - toxoids.

2. EPI- History, Cold chain, its role in preventing deaths in children.

➤ **ENVIRONMENTAL HEALTH**

**A. WATER**

1. Hydrological cycle & sources of water pollution.

2. Health hazards arising from consuming polluted water; water borne diseases.

3. Slow sand & Rapid sand filters.

1. Composition of air, Vitiating of air.

**C. DISPOSAL OF WASTE**

1. Methods of disposal of human excreta & sewage.

**D. OTHER TOPICS OF ENVIRONMENTAL HEALTH**

1. Healthful housing
2. Noise pollution.
3. Tobacco & Health.
4. Effects of health and cold extremes.

**➤ SOCIAL SCIENCES**

1. Introduction, Types of families, social evils including Juvenile delinquency.

**➤ INFORMATION, EDUCATION AND COMMUNICATION (IEC)**

1. Health Education: Concepts, Aims and Objectives.
2. Contents, principles and stages of health education.
3. Communication methods, barriers & skills including Social Marketing in health education.
4. Planning, organizing and evaluating a health education program.

**➤ OTHER TOPICS FOR DEMONSTRATION CLASSES**

1. Snake Bite.
2. Personal hygiene.
3. School Health Services.
4. Health advice to travelers.

**RESEARCH PROJECTS**

- Each Student is required to submit the research project report to Group Supervisor.
- The students will present research findings in scientific format for Oral/Poster Presentation.
- The Oral/Posters will be evaluated and marks will be awarded which will be incorporated in Annual Examination.

**FIELD VISITS**

1. Physical/mental/social rehabilitation Centre.
2. Visit to hospital to see hospital waste disposal.
3. Visit to an NGO.

**SKILL LEARNING.****(PROBLEM BASED LEARNING)**

1. To fill mother's card/Vaccination card.
2. Hand washing.
3. Household methods of purification of water.

**ROLE PLAYS ON HEALTH EDUCATION/COMMUNICATION****(PROBLEM BASED LEARNING)**

1. Role play on counseling for immunization.
2. Role play on counseling the mother regarding malaria in her child and using malaria protection measures.
3. Role play on counseling the family head on prevention of a chronic non-communicable diseases.

As per guidelines of PMC the undergraduate students of Medical Universities/Colleges have to conduct a research/Survey during their 4<sup>th</sup> year MBBS, this activity should be conducted in a group of 15 to 20 students. Each group of the students will be facilitated and supervised by a Faculty Member for their research work and a Short/brief booklet of research work will be submitted to the department for the evaluation and in the end a POSTER PRESENTATION seminar/activity will be organized by the department in which all the research projects conducted by students will be presented by them.

**The Research Project will have the following format.**

1. Title /Topic page
2. Dedication (optional)
3. Acknowledgements
4. Table of Contents
5. List of tables
6. List of Figures
7. Abstract
8. Introduction
9. Rationale
10. Aims & Objectives
11. Review of Literature
12. Material and methods (methodology)
13. Results
14. Discussion
15. Conclusion
16. Recommendations
17. Limitations
18. References
19. Appendix

The Research Project should be written in MS word format (any version) and preferably in Verdana style and font size should be 12 (twelve) and a double space between the lines should be used. alignment should be centrally justified and be correctly formatted to allow clear understanding of the report structure, whereas for tables and Graphs/Charts Excel (software) can be used. It should be free from formatting and typographical mistakes.

The Research report / project should be 1500 to 2000 words in length. This corresponds to 35-40 double spaced size pages. Longer reports/dissertations will not be accepted. Photographs (if any) should be scanned, oversized (A3 or longer) could be used where absolute necessary but properly folded. Only computer drawn tables and graphs are allowed. Preliminary pages should be numbered in lower case Roman numerical- Dedication, certificate, acknowledgment, Abstract. Pages should be numbered, at center bottom of the page.

- The Research Report/ project should be neatly bound with cover.

### **Most important**

- You have limited time and training for data collection
- The problem that you choose should be relevant, feasible, simple and answerable.
- The outcome should be measureable using a valid instrument.
- It should be researchable within the resources available to the student groups.

#### **1. SELECTION OF RESEARCH TOPIC/TITLE / RESEARCH QUESTION.**

- The title is meant to convey the research question precisely.
- It should not be too lengthy, yet it must convey the subject and arouse curiosity.
- The population in which the study would be conducted should find a mention in the title as this is the population to which the results are applicable the most.

#### **For Example:**

To study the risk factors associated with domestic violence among the women attending the OPD/clinic of a tertiary care hospital of Hyderabad.

If required, the study design can also be included in the title.

#### **For example:**

“A case control study to assess the association of consumption of salt with Hypertension among elderly population of Hyderabad”

#### **2. INTRODUCTION**

- In this section a brief explanation of why was the topic chosen, its relevance and importance is made.
- A brief account is given about the gaps in the existing knowledge. By the end of the introduction the emphasis should be sharply concentrated on which part of the problem will be dealt with.
- Small portion of the literature review may need to be cited to highlight the importance of answering the problem, but take care limiting the content to that much only. This piece of literature also need to be included in the reference section and cited with respective number at the end of the last sentence.
- Introduction should not be too long; it is best presented in one or two pages only.



- The objectives should be listed and numbered
- Each objective must pertain to only one aspect of the study.
- Each objective should be clear, specific and measurable.
- Each objective should begin with an action word like,
- “to determine....; to measure....; to assess....; etc.
- Try to keep the Objectives as few as possible

**For example:**

**Topic:** A Study of Socio-Demographic Profile of Run-away Boys of Hyderabad.

## OBJECTIVES

1. To study the demographic profile of the run-away boys of Hyderabad.
2. To ascertain the common reasons for running away from home in the study population.
3. To identify the risk factors associated with running away behavior in the study population

## 4. REVIEW OF LITERATURE (ROL)

- Under this section, the finding of previous studies which have been conducted with one or more objectives similar to your study are cited.
- Include all the relevant studies. Do not be tempted to include only those studies which report results similar to your findings. Equally include the literature which is contrary to or inconsistent with your findings.
- If required, text from books, news releases and government releases may be included.
- The previous studies done in the same area and population as the present study are the most relevant.
- All these (studies, books, government releases) are to be cited in the reference section.
- ROL is not simply the list of previous studies listed in chronologically,
- The student is supposed to read thoroughly, understand and analyze each article and “synthesize” the ROL around the research problem and objectives of the present study /project.
- It summarizes what has been reported on each objectives and what remains to be done.
- How you organize the ROL depends upon the aim and objectives of your study, but the central point is that you have to organize it and make it coherent related to your research objectives.

## 5. Material & Methods (METHODOLOGY)

This section gives a precise description of what was the study design and how were the participants enrolled. It also tells the equipment and the techniques used for data collection and analysis.



- **Study Setting**
  - **Study Duration**
  - **Study Population**
  - **Sample size (calculation/formula) (min-100)**
  - **Sample Technique(chosen) (simple random)**
  - **Inclusion criteria**, means the group of characteristics that make a participant/subject eligible for the study.
  - **Exclusion criteria**, means the group of characteristics that make a participant/subject NOT eligible for the study.
- If participants were categorized like, heavy, moderate, mild etc. then clearly define the criteria for this.
  - If needed, you can add the justification of why the participants were chosen as being representative of the target population in the section.

#### **Materials**

- This section explain which were the variables assessed.
- What is the operational definition of the assessed variable?
- What was the instrument used to measure the outcome variable?

**For example;** Questionnaire and Scales applied for the measurement should be explained.

- **Statistics**
- How were the data tabulated and which summary values were calculated?
- Which test of significance have been used
- Mention the software used / or manually analyze the data

#### **6. RESULTS**

- The data collected during the study are presented in this section.
- The data is presented in form of Table, Graphs and text.
- The results should proceed in a logical sequence.
- First the basic tables and statements describing the study population are presented e.g. the mean age, age composition of the study population
- Tables and graphs /figure should be numbered.
- The title of the table and figure should be self-explanatory
- The title of a table mention on top of the table and beneath in the case of figure.
- The figure should be accompanied by a key that explain the figure.

#### **7. DISCUSSION**

New and important facts emerging from the study are emphasized.  
Main findings are summarized.

The findings of the study are compared with those of other similar studies. The similarities are pointed out. Also the difference in the results are highlighted and efforts are made to explain these.

## 8. CONCLUSION

The conclusion drawn is based on the findings of your study and in the light of other studies included in the “discussion”

**For example:** In this study among the school students of some government run primary schools in Hyderabad, the prevalence of positive (for round worm eggs) stool samples was significantly lesser in the schools with hand washing health education.

## 9. RECOMMENDATIONS

These are based on the findings of your study after comparison with similar studies. That means the recommendations are based on the discussion of your study.

- The recommendations for the hand washing can be as.
  - Health education regarding hand washing should be introduced in the government –run primary schools of Hyderabad.

## 10. LIMITATIONS

**For example:**

Due to limitation of time, only four schools in the vicinity of our institution were included.

## 11. REFERENCES

Referencing is a standardized way of acknowledging the sources of information and ideas that we have used in our project/assignments which allows the sources to be identified.

Types of References are, Vancouver system, Harvard system, APA (American Psychological Association) style.

Enlist the studies, books and web sites, etc., which have been cited in the sections of “Introduction”, “Review of Literature” and “discussion” sections, there are numbers of styles for enlisting the references,

References should be numbered consecutively in the order in which they are first mentioned in the text.

Vancouver Reference style is recommended

## 12. APPENDIX

Details of scales used and questionnaire.

### Online Search Engines

- PubMed
- e-journals
- Medline
- WebMD
- embase
- Unicef.org
- WHO.int
- Books Journals
- Offline Sources
- News report
- Government releases