Doctor in Society (DIS) Stream
Module - DIS 1   (Population and Health) Y2 S2 (Credits -2)

Topic	Time	Objectives	Dept	Teaching method/s
Introduction to Community Medicine – Scope & the relevance **Introduction to DIS Module**	1 hour	Should understand that Community Medicine is a modern & practical subject to achieve good status of health of the population. Should know that knowledge on preventive health & services in preventing diseases are delivered in a systematic manner that requires special training. To appreciate that collective responsibility regarding preventing diseases locally & globally is achieved from the feedback from the field of Community Medicine	CM	Lecture
Introduction to Environmental Health	1 hour	Re cap what is meant by " Environment" Describe how physical biological and social environment affect the Health Describe the changing health problems over the past decade due to industrialization urbanization , technological development. Identify and compare the environmental problems having major impacts on human health in urban rural & estate areas in Sri Lanka List the objectives of the environmental health programme of the dept of health in Sri Lanka.		Lecture
Water pollution	1 hour	Describe the sources of water and their physical chemical & micro biological qualities Describe the physical, chemical and biological parameters of water quality List the sources of water pollution List the common sources of water pollution in Sri Lanka Classify the water pollutants by their environmental and health effects What are the effects of water pollution? Describe the water related diseases giving examples. Explain what are meant by bioaccumulation, bio magnification and eutrophication. List the ecological factors of eutrophication Describe the reasons for the "Fresh water problem" in world and describe the possible solutions. Describe the preventive measures of water pollution Describe large scale and household level water purification methods List the features of a semi protected and a protected well and their importance in safeguarding health. Write down the process carried out in chlorination of a well List the steps carried out in a water purifications plant and describe how each step will improve the quality of water		Lecture

		List the diseases associated with the use of swimming pools and measures taken to control them.		
Air Pollution + Urbanization	1 hour	Define air pollution		Lecturer
		List the common ways by which indoor and outdoor air pollution occurs in Sri Lanka		
		List the common air pollutants and their effects on health		
		Describe the ways of preventing indoor and outdoor air pollution		
		List the health effects of indoor and outdoor air pollution		
		Describe the health effects of global warming and depletion of ozone layer and acid rain		
		Write an account on global and Sri Lankan trends in urbanization		
		List the communicable diseases and emerging & reemerging communicable diseases that are more prevalent in urban areas.		
		List the non-communicable diseases and emerging non -communicable diseases that are more prevalent in urban areas and to describe the contributory factors for those.		
		Describe the interventions to achieve 'Healthy Urbanization' to improve urban health		
Sound pollution + **Solid waste disposal**	1 hour	Know the maximum permissible levels of loudness		Lecture
		Describe the ways of controlling excessive noise		
		List auditory and non-auditory health effects due to sound pollution		
		Describe the health hazards of improper solid waste disposal		
		List the different methods of refuse disposal and their advantages and disadvantages		
		Describe the principles of proper waste disposal		
		What is hazardous waste?		
		Describe the impact of hazardous waste on human health and describe the proper methods of hazardous waste disposal		
Sewage disposal + **Electronic waste** **management**	1 hour	Describe the health hazards of improper excreta disposal		Lecture
		List the types of latrines used in Sri Lanka and the advantages and disadvantages of each type.		
		Describe the function of a septic tank		
		Describe the methods of modern sewage treatment and other methods such as oxidation ponds		
		Describe what is biological O_2 demand (BOD) and Chemical O_2 demand (COD)		
		List the authorities and their functions in respect to monitoring and implementation of laws concerning environmental pollution		
		State the definition of electronic waste.		
		List the electronic waste substances found in large quantities, small amounts and trace amounts.		

Topic	Time	Objectives		Method
		List the hazardous substances found in electronic waste		
		What are the generally non – hazardous substances found in electronic waste ?		
		Explain why electronic waste will be a global threat in the future		
		Explain why electronic waste is severe environmental pollutant in Sri Lanka		
		What is the impact of electronic waste on environment		
		Describe ' National e – waste management programme'		
Housing affecting the health of a human being + food hygiene	1 hour	List the features of a healthy house.		Lecture
		Describe the health effects of poor housing		
		Describe the laws and regulations laid down in Sri Lanka to promote healthy housing.		
		Describe the ways in which food becomes injurious to health		
		List the authorized officers and the organizations responsible for carrying out laws and regulations pertaining to food safety		
		List the steps taken by an authorized officer as a response to complaints made by consumers of a food item		
		Describe the procedure of inspecting a food handling establishment and the maintenance of relevant records		
		Describe the ways of maintaining food hygiene in Sri Lanka		
Small Group Disscussion on Environmental Health	1 hour	Discuss the impact of poor environment on health and the measures that can be taken to prevent them		SGD
Introduction to medical sociology	1 hour	Be able to understand the importance of medical sociology in patient care		Lecture
		be able to define culture		
		be a able to appreciate the role played by culture in health and illness		
		be able to describe culturally constructed health care systems and their functions		
Application of theories of medical sociology	1 hour	be able to use basic theories and tools in medical sociology to analyze health related problems		Lecture
		be aware of the basic theories in health behavior		
		be aware of the basic models used to analyze health behavior		
		be able to appreciate sociological factors that has given rise to exceptionally good health indicators in Sri Lanka		
Introduction to Demography	1 hour	Should be able to define demography		Lecture
		Should be aware of the dynamics of population changes and its relevance.		
		eg: mortality, fertility, migration.		

		Should know how demography is related to other disciplines and to non-demographic variables		
		Should be able to list the different sources of demographic data and how a census is conducted.		
		Should be able to explain the differences between basic demographic measures.		
		eg. count, rate, ratio and proportion.		
Population structure and Demographic transition	1 hour	Should know how a population pyramid is constructed. Should know the types of population pyramids and the importance of having them for each country Should be able to compare the population pyramids between developed and developing countries. Should be able to describe the effect of the age and sex structure on mortality and fertility rates. Should know the demographic characteristics of the Sri Lankan population & how it changed over time Should be able to calculate the age dependency ratio and know its impact on the economy & health of a country. Should be able to describe the implications of an ageing population Should be able to describe the factors influencing reproductive life span and discuss its implications		Lecture

Fertility trends and Indicators	1 hour	Should be able to describe the factors contributing to fertility patterns in a country.
		Should be able to define, calculate and interpret the following rates and ratios.
		    a. Crude birth rate
		    b. General fertility rate
		    c. Age specific fertility rate
		    d. Total fertility rate
		    e. Gross reproductive rate
		    f. Net Reproductive rate
		    g. Sex ratio
				Lecture

Mortality trends and Indicators	1 hour	Should be able to describe the factors contributing to mortality patterns in a country.
		Should understand the importance of studying mortality patterns & indicators
		Should be able to define, calculate and interpret the following rates and ratios.
		    a. Crude death rate
		    b. Infant mortality rate
		    c. Neonatal mortality rate & Post neonatal mortality rate
		    d. Maternal mortality rate
		    e. Maternal mortality ratio
		    f. Age specific mortality rates
		    g. Cause specific mortality rates
		    h. Still birth rate
		    i. Peri-natal mortality rate
				Lecture

		j. Abortion ratio and abortion rate k. Natural increase		
Migration & Health	1 hour	Should be able to define migration and a migrant. Should be able to explain the effect of migration on socio-demographic profile of a country. Should be aware of the important international and internal migration that occurred in past / occurring at present in Sri Lanka and their impacts on demographic and socio-economic factors. Should be able to discuss the health impacts of migration on different migrant groups. eg. women migrating to middle east, countries as housemaids, youth migrating to free trade zones. Should be able to explain what a 'Migrant Study' is and the importance of conducting migrant studies.		Lecture

Standardization of mortality rates	1 hour	Should know the different methods in standardization of mortality rates.
		   o Direct Standardization
		   o Indirect Standardization
		Should understand the importance of standardization.
				Lecture

Life expectancy and quality of life	1 hour	Should be able to define life expectancy
		Should know the concept of life tables
		Be aware of indices that measure quality of life
		   o Physical Quality of Life Index
		   o Human Development Index
		Should understand why Disability Adjusted Life Years is calculated.
				Lecture

Demography revision	1 hour	Problem solving session.		Discussion
Primary Health Care Concept	1 hour	Student should be able to Understand the concept of Primary Health Care Understand the history of Primary Health Care Define terms related to Primary Health Care Define & describe elements of Primary Health Care Understand the differences between Primary Health Care & Selective Primary Health Care		Lecture
Primary Health Care in Sri Lanka	1 hour	Define elements of Primary Health Care relevant to Sri Lanka Understand the application of Primary Health Care concept in Sri Lanka		Lecture
Introduction to Oral Health	1 hour	The aetiology and clinical features of the important oral diseases, principally dental caries, periodontal diseases, oral cancer, dental fluorosis and malocclusion and the extent to which these are public health problems in Sri Lanka. The manner in which oral diseases patterns are affected by life style		Lecture

		The organization of dental services in Sri Lanka and the functions of dental surgeons in the state and private sector		
Oral Health	1 hour	Available strategies for the prevention and control of the above dental disease The role of dental auxiliaries in Sri Lankan dental services The common facio maxillary injuries including injuries to the teeth, the scope of treatment and the relative responsibility of dentists and doctors in facio maxillary surgery. The broad scope of the different dental disciplines and the range of specialization open to dental surgeons globally in Sri Lanka		Lecture
Principles of injury prevention	1 hour	To understand The historical contexts and development of the field of injury prevention and control; The theory and principles of injury prevention and control; the debate concerning the terms "accidents" compared with "injuries"; The conceptual models for injury prevention, including the Haddon Matrix and the ecological model, and their relevance to the 5 Es of injury prevention; The main causes of death globally as a result of injury with the overall patterns of injury through the life cycle; Burden of disease as a consequence of injuries, on individuals and society; Potential sources of injury-related data.		Lecture
Measurement of Injuries	1 hour	To gain an understanding of: The difference between measures of exposure in the study of injuries such as counts, proportions and rates used to measure mortality and morbidity and the advantages and disadvantages of using different denominators; The concept of lifetime measures (life expectancy and years of potential life lost); The concept of summary measures of population health; The potential uses of summary measures of population health for the estimation of the burden of injuries (including the concept of the global burden of disease and cost-effectiveness analysis; The concepts related to measuring the economic burden of injury and cost–benefit analysis.		Lecture

Injury Surveillance 1	1 hour	Describe the concept of an injury surveillance system.
		Identify the multiple uses of surveillance for research, control and policy development.
		Recognize the different types of injury surveillance systems including:
		   o whole population surveillance
		   o surveillance based on sampling
		   o institutional review of registries
		Recognize the attributes of major coding systems such as ICD and ICECI and important data items
				Lecture

		such as mechanism, intent and setting.
		Understand the sequence of necessary steps required for surveillance including:
		   o how surveillance can define an injury problem
		   o the process of minimum data collection for surveillance
		   o the definition of data entry and processing protocols
		   o the basic elements for interpretation of data
		   o clear reporting of results
		   o the potential use of results to plan interventions
		   o the functionality of a surveillance system
		   o the basic steps necessary to maintain a surveillance system.		

Injury Surveillance II	1 hour	Identify the attributes of an injury surveillance system Describe the process for identifying stakeholders of an injury surveillance system. Define the objectives of a surveillance system. Describe case definitions and potential sources of data in the process of creating or enhancing an injury surveillance system. Identify existing available resources for injury surveillance. Describe the data needs of an injury surveillance system and formulate strategies and procedures for data collection. Describe the conceptual basis for establishing a system for data processing. Identify the basic elements for designing and disseminating reports. Formulate the principles for injury surveillance system training. Formulate strategies for data quality control. Evaluate critically the importance of the compatibility of data with standard (international) and existing data systems. Evaluate critically an existing injury surveillance system or plan the creation of a system (exercise).		Lecture
Road Traffic Injuries	1 hour	To understand the basic concepts related to road traffic injuries. To recognize that road traffic injuries are a significant public health issue in terms of both fatalities and their contribution to the global burden of disease and injury. To understand that the prevention of road traffic injuries requires a systems approach, and be able to apply the Haddon Matrix to conceptualise a road traffic injury scenario, and identify points for intervention. To understand the main determinants and risk factors associated with road traffic injuries. To understand the role and responsibilities of public health in addressing the road traffic injury issue through research, evidence and data, advocacy, the sharing of information, and the design,		Lecture

		implementation and evaluation of interventions.		
Health Information System	1 hour	Be able to To understand about the health information system in Sri Lanka To know about the components of national HIS To learn about the source of information system To learn understand about the dissemination of information to get the national data on on Health System To learn and understand the deficiencies of present health information system.		Lecture
Emerging Health Problems	1 hour	Be able to understand the changing pattern of diseases globally Understand changing patterns of disease over time. Be able to list diseases that will predominate in the near future Be able to grasp the contributing factors that could give rise to the changes Be able to understand and appreciate the challenges faced by individual countries and the world as whole in the face of changing patterns of disease		Lecture
Revision/ SGL **Community medicine**	1 hour			Discussion