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MBBS CURRICULUM: Topics related to Cross cutting issues

FORENSIC MEDICINE & TOXICOLOGY:

FM1.1 Demonstrate knowledge of basics of Forensic Medicine like definitions of Forensic medicine, Clinical Forensic Medicine, Forensic Pathology, State Medicine, Legal Medicine and Medical Jurisprudence

FM1.2 Describe history of Forensic Medicine K KH N Lecture, Small Group

FM1.3 Describe legal procedures including Criminal Procedure Code, Indian Penal Code, Indian Evidence Act, Civil and Criminal Cases, Inquest (Police Inquest and Magistrate's Inquest), Cognizable and Non-cognizable offences

FM1.4 Describe Courts in India and their powers: Supreme Court, High Court, Sessions court, Magistrate's Court, Labour Court, Family Court, Executive Magistrate Court and Juvenile Justice Board

FM1.5 Describe Court procedures including issue of Summons, conduct money, types of witnesses, recording of evidence oath, affirmation, examination in chief, cross examination, re-examination and court questions, recording of evidence & conduct of doctor in witness box

FM1.6 Describe Offenses in Court including Perjury; Court strictures vis-avis Medical Officer

FM1.7 Describe Dying Declaration & Dying Deposition K KH Y Lecture, Small Group

FM1.8 Describe the latest decisions/notifications/resolutions/ circulars/standing orders related to medico-legal practice issued by Courts/Government authorities etc.

FM1.9 Describe the importance of documentation in medical practice in regard to medicolegal examinations, Medical Certificates and medicolegal reports especially

- maintenance of patient case records, discharge summary, prescribed registers to be maintained in Health Centres

- maintenance of medico-legal register like accident register.

- documents of issuance of wound certificate

- documents of issuance of drunkenness certificate.

- documents of issuance of sickness and fitness certificate.

- documents for issuance of death certificate. -documents of Medical Certification of Cause of Death - Form Number 4 and 4A

- documents for estimation of age by physical, dental and radiological examination and issuance of certificate

FM1.10 Select appropriate cause of death in a particular scenario by referring ICD 10 code

FM1.11 Write a correct cause of death certificate as per ICD 10 document

FM2.1 Define, describe and discuss death and its types including somatic/clinical/cellular, molecular and brain-death, Cortical Death and Brainstem Death

FM2.2 Describe and discuss natural and unnatural deaths K KH Y Lecture, Small Group

FM2.3 Describe and discuss issues related to sudden natural deaths K KH Y Lecture, Small Group

FM2.4 Describe salient features of the Organ Transplantation and The Human Organ Transplant (Amendment) Act 2011 and discuss ethical issues regarding organ donation

FM2.5 Discuss moment of death, modes of death - coma, asphyxia and syncope

FM2.6 Discuss presumption of death and survivorship

FM2.7 Describe and discuss suspended animation

FM2.8 Describe and discuss postmortem changes including signs of death, cooling of body, post-mortem lividity, rigor mortis, cadaveric spasm, cold stiffening and heat stiffening

FM2.9 Describe putrefaction, mummification, adipocere and maceration

FM2.10 Discuss estimation of time since death

FM2.11 Describe and discuss autopsy procedures including post-mortem examination, different types of autopsies, aims and objectives of post-mortem examination

FM2.12 Describe the legal requirements to conduct post-mortem examination and procedures to conduct medico-legal post-mortem examination

FM2.13 Describe and discuss obscure autopsy

FM2.14 Describe and discuss examination of clothing, preservation of viscera on post-mortem examination for chemical analysis and other medico-legal purposes, post-mortem artefacts

FM 2.15 Describe special protocols for conduction of medico-legal autopsies in cases of death in custody or following violation of human rights as per National Human Rights Commission Guidelines

FM2.16 Describe and discuss examination of mutilated bodies or fragments, charred bones and bundle of bones

FM2.17 Describe and discuss exhumation

FM2.18 Crime Scene Investigation:- Describe and discuss the objectives of crime scene visit, the duties & responsibilities of doctors on crime scene and the reconstruction of sequence of events after crime scene investigation

FM2.19 Investigation of anaesthetic, operative deaths: Describe and discuss special protocols for conduction of autopsy and for collection, preservation and dispatch of related material evidences

FM2.20 Mechanical asphyxia: Define, classify and describe asphyxia and medico-legal interpretation of post-mortem findings in asphyxial deaths

FM2.21 Mechanical asphyxia: Describe and discuss different types of hanging and strangulation including clinical findings, causes of death, post-mortem findings and medico-legal aspects of death due to hanging and strangulation including examination, preservation and dispatch of ligature material

FM2.22 Mechanical asphyxia:
Describe and discuss patho-physiology, clinical features, postmortem findings and medico-legal aspects of traumatic asphyxia, obstruction of nose & mouth, suffocation and sexual asphyxia

FM2.23 Describe and discuss types, patho-physiology, clinical features, postmortem findings and medico-legal aspects of drowning, diatom test and, gettler test.

FM2.24 Thermal deaths: Describe the clinical features, post-mortem finding and medicolegal aspects of injuries due to physical agents like heat (heat-hyper-pyrexia, heat stroke, sun stroke, heat exhaustion/prostration, heat cramps [miner's cramp] or cold (systemic and localized hypothermia, frostbite, trench foot, immersion foot)

FM2.25 Describe types of injuries, clinical features, patho-physiology, postmortem findings and medico-legal aspects in cases of burns, scalds, lightening, electrocution and radiations

FM2.26 Describe and discuss clinical features, post-mortem findings and medico-legal aspects of death due to starvation and neglect

FM2.27 Define and discuss infanticide, foeticide and stillbirth

FM2.28 Describe and discuss signs of intrauterine death, signs of live birth, viability of foetus, age determination of foetus, DOAP session of ossification centres, Hydrostatic test, Sudden Infants Death syndrome and Munchausen's syndrome by proxy

FM2.29 Demonstrate respect to the directions of courts, while appearing as witness for recording of evidence under oath or affirmation, examination in chief, cross examination, re-examination and court questions, recording of evidence

FM2.30 Have knowledge/awareness of latest decisions/notifications/resolutions/circulars/standing orders related to medico-legal practice issued by Courts/Government authorities etc

FM2.31 Demonstrate ability to work in a team for conduction of medico-legal autopsies in cases of death following alleged negligence medical dowry death, death in custody or following violation of human rights as per National Human Rights Commission Guidelines on exhumation

FM2.32 Demonstrate ability to exchange information by verbal, or nonverbal communication to the peers, family members, law enforcing agency and judiciary

FM2.33 Demonstrate ability to use local resources whenever required like in mass disaster situations

FM2.34 Demonstrate ability to use local resources whenever required like in mass disaster situations

FM2.35 Demonstrate professionalism while conducting autopsy in medicolegal situations, interpretation of findings and making inference/opinion, collection preservation and dispatch of biological or trace evidences

FM3.1 IDENTIFICATION Define and describe Corpus Delicti, establishment of identity of living persons including race, Sex, religion, complexion, stature, age determination using morphology, teeth-eruption, decay, bite marks, bones-ossification centres, medico-legal aspects of age

FM3.2 IDENTIFICATION Describe and discuss identification of criminals, unknown persons, dead bodies from the remains-hairs, fibers, teeth, anthropometry, dactylography, foot prints, scars, tattoos, poroscopy and superimposition

FM3.3 Mechanical injuries and wounds: Define, describe and classify different types of mechanical injuries, abrasion, bruise, laceration, stab wound, incised wound, chop wound, defense wound, self-inflicted/fabricated wounds and their medico-legal aspects

FM3.4 Mechanical injuries and wounds: Define injury, assault & hurt. Describe IPC pertaining to injuries

FM3.5 Mechanical injuries and wounds: Describe accidental, suicidal and homicidal injuries. Describe

simple, grievous and dangerous injuries. Describe ante-mortem and post-mortem injuries

FM3.6 Mechanical injuries and wounds:

FM3.7 Describe factors influencing infliction of injuries and healing, examination and certification of wounds and wound as a cause of death

FM3.8 Mechanical injuries and wounds: Describe and discuss different types of weapons including dangerous weapons and their examination

FM3.9 Firearm injuries: Describe different types of firearms including structure and components. Along with description of ammunition propellant charge and mechanism of fire-arms, different types of cartridges and bullets and various terminology in relation of firearm – caliber, range, choking

FM3.10 Firearm injuries: Describe and discuss wound ballistics-different types of firearm injuries, blast injuries and their interpretation, preservation and dispatch of trace evidences in cases of firearm and blast injuries, various tests related to confirmation of use of firearms

FM3.11 Regional Injuries: Describe and discuss regional injuries to head (Scalp wounds, fracture skull, intracranial haemorrhages, coup and contrecoup injuries), neck, chest, abdomen, limbs, genital organs, spinal cord and skeleton

FM3.12 Regional Injuries Describe and discuss injuries related to fall from height and vehicular injuries – Primary and Secondary impact, Secondary injuries, crush syndrome, railway spine

FM3.13 Describe different types of sexual offences. Describe various sections of IPC regarding rape including definition of rape (Section 375 IPC), Punishment for Rape (Section 376 IPC) and recent amendments notified till date

FM3.14 SEXUAL OFFENCES Describe and discuss the examination of the victim of an alleged case of rape, and the preparation of report, framing the opinion and preservation and dispatch of trace evidences in such cases

FM3.15 SEXUAL OFFENCES Describe and discuss examination of accused and victim of sodomy, preparation of report, framing of opinion, preservation and dispatch of trace evidences in such cases

FM3.16 SEXUAL OFFENCES Describe and discuss adultery and unnatural sexual offences sodomy, incest, lesbianism, buccal coitus, bestiality, indecent assault and preparation of report, framing the opinion and preservation and dispatch of trace evidences in such cases

FM3.17 Describe and discuss the sexual perversions fetishism, transvestism, voyeurism, sadism, necrophagia, masochism, exhibitionism, frotteurism, Necrophilia

FM3.18 Describe anatomy of male and female genitalia, hymen and its types. Discuss the medico-legal importance of hymen. Define virginity, defloration, legitimacy and its medicolegal importance

FM3.19 Discuss the medicolegal aspects of pregnancy and delivery, signs of pregnancy, precipitate labour, superfoetation, superfecundation and signs of recent and remote delivery in living and dead

FM3.20 Discuss disputed paternity and maternity

FM3.21 Discuss Pre-conception and Pre Natal Diagnostic Techniques(PC&PNDT) - Prohibition of Sex Selection Act 2003 and Domestic Violence Act 2005

FM3.22 Define and discuss impotence, sterility, frigidity, sexual dysfunction, premature ejaculation. Discuss the causes of impotence and sterility in male and female

FM3.23 Discuss Sterilization of male and female, artificial insemination, Test Tube Baby, surrogate mother, hormonal replacement therapy with respect to appropriate national and state laws

FM3.24 Discuss the relative importance of surgical methods of contraception (vasectomy and tubectomy) as methods of contraception in the National Family Planning Programme

FM3.25 Discuss the major results of the National Family Health Survey

FM3.26 Discuss the national Guidelines for accreditation, supervision & regulation of ART Clinics in India

FM3.27 Define, classify and discuss abortion, methods of procuring MTP and criminal abortion and complication of abortion. MTP Act 1971

FM3.28 Describe evidences of abortion - living and dead, duties of doctor in cases of abortion, investigations of death due to criminal abortion

FM3.29 Describe and discuss child abuse and battered baby syndrome

FM3.30 Describe and discuss issues relating to torture, identification of injuries caused by torture and its sequelae, management of torture survivors

FM3.31 Torture and Human rights Describe and discuss guidelines and Protocols of National Human Rights Commission regarding torture

FM3.32 Demonstrate the professionalism while preparing reports in medicolegal situations, interpretation of findings and making inference/opinion, collection preservation and dispatch of biological or trace evidences

FM3.33 Should be able to demonstrate the professionalism while dealing with victims of torture and human right violations, sexual assaults psychological consultation, rehabilitation

FM4.1 Describe Medical Ethics and explain its historical emergence

FM4.2 Describe the Code of Medical Ethics 2002 conduct, Etiquette and Ethics in medical practice and unethical practices & the dichotomy

FM4.3 Describe the functions and role of Medical Council of India and State Medical Councils

FM4.4 Describe the Indian Medical Register

FM4.5 Rights/privileges of a medical practitioner, penal erasure, infamous conduct, disciplinary Committee, disciplinary procedures, warning notice and penal erasure

FM4.6 Describe the Laws in Relation to medical practice and the duties of medical practitioner towards patients and society

FM4.7 Describe and discuss the ethics related to HIV patients

FM4.8 Describe the Consumer Protection Act-1986 (Medical Indemnity Insurance, Civil Litigations and Compensations), Workman's Compensation Act & ESI Act

FM4.9 Describe the medico - legal issues in relation to family violence, violation of human rights, NHRC and doctors

FM4.10 Describe communication between doctors, public and media K KH Y Lecture, Small group discussion

FM4.11 Describe and discuss euthanasia FM4.12 Discuss legal and ethical issues in relation to stem cell research

FM4.13 Describe social aspects of Medico-legal cases with respect to victims of assault, rape, attempted suicide, homicide, domestic violence, dowry- related cases

FM4.14 Describe & discuss the challenges in managing medico-legal cases including development of skills in relationship management – Human behaviour, communication skills, conflict resolution techniques

FM4.15 Describe the principles of handling pressure – definition, types, causes, sources and skills for managing the pressure while dealing with medico-legal cases by the doctor

FM4.16 Describe and discuss Bioethics

FM4.17 Describe and discuss ethical Principles: Respect for autonomy, non-maleficence, beneficence & justice

FM4.18 Describe and discuss medical negligence including civil and criminal negligence, contributory negligence, corporate negligence, vicarious liability, Res Ipsa Loquitur, prevention of medical negligence and defenses in medical negligence litigations

FM4.19 Define Consent. Describe different types of consent and ingredients of informed consent. Describe the rules of consent and importance of consent in relation to age, emergency situation, mental illness and alcohol intoxication

FM4.20 Describe therapeutic privilege, Malingering, Therapeutic Misadventure, Professional Secrecy, Human Experimentation

FM4.21 Describe Products liability and Medical Indemnity Insurance

FM4.22 Explain Oath – Hippocrates, Charaka and Sushruta and procedure for administration of Oath.

FM4.23 Describe the modified Declaration of Geneva and its relevance K KH Y Lecture, Small group discussion

FM4.24 Enumerate rights, privileges and duties of a Registered Medical Practitioner. Discuss doctor- patient relationship: professional secrecy and privileged communication

FM4.25 Clinical research & Ethics Discuss human experimentation including clinical trials

FM4.26 Discuss the constitution and functions of ethical committees

FM4.27 Describe and discuss Ethical Guidelines for Biomedical Research on Human Subjects & Animals

FM4.28 Demonstrate respect to laws relating to medical practice and Ethical code of conduct prescribed by Medical Council of India and rules and regulations prescribed by it from time to time

FM4.29 Demonstrate ability to communicate appropriately with media, public and doctors

FM4.30 Demonstrate ability to conduct research in pursuance to guidelines or research ethics

FM5.1 Classify common mental illnesses including post-traumatic stress disorder (PTSD)

FM5.2 Define, classify and describe delusions, hallucinations, illusion, lucid interval and obsessions with exemplification

FM5.3 Describe Civil and criminal responsibilities of a mentally ill person K K/KH Y Lecture, Small group discussion

FM5.4 Differentiate between true insanity from feigned insanity

FM5.5 Describe & discuss Delirium tremens

FM5.6 Describe the Indian Mental Health Act, 1987 with special reference to admission, care and discharge of a mentally ill person

FM6.1 Describe different types of specimen and tissues to be collected both in the living and dead: Body fluids (blood, urine, semen, faeces saliva), Skin, Nails, tooth pulp, vaginal smear, viscera, skull, specimen for histopathological examination, blood grouping, HLA Typing and DNA Fingerprinting. Describe Locard's Exchange

FM6.2 Describe the methods of sample collection, preservation, labelling, dispatch, and interpretation of reports

FM6.3 Demonstrate professionalism while sending the biological or trace evidences to Forensic Science laboratory, specifying the required tests to be carried out, objectives of preservation of evidences sent for examination, personal discussions on interpretation of findings

FM7.1 Enumerate the indications and describe the principles and appropriate use for:

- DNA profiling -
Facial reconstruction
- Polygraph (Lie Detector)
- Narcoanalysis,
- Brain Mapping,
- Digital autopsy,
- Virtual Autopsy,
- Imaging technologies

FM8.1 Describe the history of Toxicology

FM8.2 Define the terms Toxicology, Forensic Toxicology, Clinical Toxicology and poison

FM8.3 Describe the various types of poisons, Toxicokinetics, and Toxicodynamics and diagnosis of poisoning in living and dead

FM8.4 Describe the Laws in relations to poisons including NDPS Act, Medico-legal aspects of poisons

FM8.5 Describe Medico-legal autopsy in cases of poisoning including preservation and dispatch of viscera for chemical analysis

FM8.6 Describe the general symptoms, principles of diagnosis and management of common poisons encountered in India

FM8.7 Describe simple Bedside clinic tests to detect poison/drug in a patient's body fluids

FM8.8 Describe basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination

FM8.9 Describe the procedure of intimation of suspicious cases or actual cases of foul play to the police, maintenance of records, preservation and despatch of relevant samples for laboratory analysis.

FM8.10 Describe the general principles of Analytical Toxicology and give a brief description of analytical methods available for toxicological analysis: Chromatography – Thin Layer Chromatography, Gas Chromatography, Liquid Chromatography and Atomic Absorption Spectroscopy

FM9.1 Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to: Caustics Inorganic – sulphuric, nitric, and hydrochloric acids; Organic- Carbolic Acid (phenol), Oxalic and acetylsalicylic acids

FM9.2 Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Phosphorus, Iodine, Barium

FM9.3 Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Arsenic, lead, mercury, copper, iron, cadmium and thallium

FM9.4 Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Ethanol, methanol, ethylene glycol

FM9.5 Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Organophosphates, Carbamates, Organochlorines, Pyrethroids, Paraquat, Aluminium and Zinc phosphide

FM9.6 Describe General Principles and basic methodologies in treatment of poisoning: decontamination, supportive therapy, antidote therapy, procedures of enhanced elimination with regard to Ammonia, carbon monoxide, hydrogen cyanide & derivatives, methyl isocyanate, tear (riot control) gases

FM10.1 Describe General Principles and basic methodologies in treatment procedures of enhanced elimination with regard to:

i. Antipyretics – Paracetamol, Salicylates

ii. Anti-Infectives (Common antibiotics – an overview)

iii. Neuropsychotoxicology Barbiturates, benzodiazepines, phenytoin, lithium, haloperidol, neuroleptics, tricyclics

iv. Narcotic Analgesics, Anaesthetics, and Muscle Relaxants

v. Cardiovascular Toxicology Cardiotoxic plants – oleander, opium, aconite, digitalis vi. Gastro-Intestinal and Endocrinal Drugs – Insulin

FM11.1 Describe features and management of Snake bite, scorpion sting, bee and wasp sting and spider bite

FM12.1 Describe features and management of abuse/poisoning with following chemicals: Tobacco, cannabis, amphetamines, cocaine, hallucinogens, designer drugs & solvent

FM13.1 Describe toxic pollution of environment, its medico-legal aspects & toxic hazards of occupation and industry

FM13.2 Describe medico-legal aspects of poisoning in Workman's Compensation Act

FM14.1 Examine and prepare Medico-legal report of an injured person with different etiologies in a simulated/ supervised environment

FM14.2 Demonstrate the correct technique of clinical examination in a suspected case of poisoning & prepare medico-legal report in a simulated/ supervised environment

FM14.3 Assist and demonstrate the proper technique in collecting, preserving and dispatch of the exhibits in a suspected case of poisoning, along with clinical examination

FM14.4 Conduct and prepare report of estimation of age of a person for medico-legal and other purposes & prepare medico-legal report in a simulated/ supervised environment

FM14.5 Conduct & prepare post-mortem examination report of varied etiologies (at least 15) in a simulated/ supervised environment

FM14.6 Demonstrate and interpret medico-legal aspects from examination of hair (human & animal) fibre, semen & other biological fluids

FM14.7 Demonstrate & identify that a particular stain is blood and identify the species of its origin

FM14.8 Demonstrate the correct technique to perform and identify ABO & RH blood group of a person

FM14.9 Demonstrate examination of & present an opinion after examination of skeletal remains in a simulated/ supervised environment

FM14.10 Demonstrate ability to identify & prepare medicolegal inference from specimens obtained from various types of injuries e.g. contusion, abrasion, laceration, firearm wounds, burns, head injury and fracture of bone

FM14.11 To identify & describe weapons of medicolegal importance which are commonly used e.g. lathi, knife, kripan, axe, gandasa, gupti, farsha, dagger, bhalla, razor & stick. Able to prepare report of the weapons brought by police and to give opinion regarding injuries present on the person as described in injury report/ PM report so as to connect weapon with the injuries.
(Prepare injury report/ PM report must be provided to connect the weapon with the injuries)

FM14.13 To estimate the age of foetus by post-mortem examination

FM14.14 To examine & prepare report of an alleged accused in rape/unnatural sexual offence in a simulated/ supervised environment

FM14.15 To examine & prepare medico-legal report of a victim of sexual offence/unnatural sexual offence in a simulated/ supervised environment

FM14.16 To examine & prepare medico-legal report of drunk person in a simulated/ supervised environment

FM14.17 To identify & draw medico-legal inference from common poisons e.g. dhatura, castor, cannabis, opium, aconite copper sulphate, pesticides compounds, marking nut, oleander, Nux vomica, abrus seeds, Snakes, capsicum, calotropis, lead compounds & tobacco.

FM14.18 To examine & prepare medico-legal report of a person in police, judicial custody or referred by Court of Law and violation of human rights as requirement of NHRC, who has been brought for medical examination

FM14.19 To identify & prepare medico-legal inference from histo-pathological slides of Myocardial Infarction, pneumonitis, tuberculosis, brain infarct, liver cirrhosis, brain haemorrhage, bone fracture, Pulmonary oedema, brain oedema, soot particles, diatoms & wound healing

FM14.20 To record and certify dying declaration in a simulated/ supervised environment

FM14.21 To collect, preserve, seal and dispatch exhibits for DNA-Finger printing using various formats of different laboratories.

FM14.22 To give expert medical/ medico-legal evidence in Court of law

COMMUNITY MEDICINE: MBBS CURRICULUM

CM1.1 Define and describe the concept of Public Health K KH Y Lecture, Small group discussion

CM1.3 Describe the characteristics of agent, host and environmental factors in health and disease and the multi factorial etiology of disease

CM1.4 Describe and discuss the natural history of disease

CM1.5 Describe the application of interventions at various levels of prevention

CM1.6 Describe and discuss the concepts, the principles of Health promotion and Education, IEC and Behavioral change communication (BCC)

CM1.7 Enumerate and describe health indicators

CM1.8 Describe the Demographic profile of India and discuss its impact on health

CM1.9 Demonstrate the role of effective Communication skills in health in a simulated environment

CM1.10 Demonstrate the important aspects of the doctor patient relationship in a simulated environment

CM2.1 Describe the steps and perform clinico socio-cultural and demographic assessment of the individual, family and community

CM2.2 Describe the socio-cultural factors, family (types), its role in health and disease & demonstrate in a simulated environment the correct assessment of socio-economic status

CM2.3 Describe and demonstrate in a simulated environment the assessment of barriers to good health and health seeking behavior

CM2.4 Describe social psychology, community behaviour and community relationship and their impact on health and disease

CM2.5 Describe poverty and social security measures and its relationship to health and disease

CM3.1 Describe the health hazards of air, water, noise, radiation and pollution

CM3.2 Describe concepts of safe and wholesome water, sanitary sources of water, water purification processes, water quality standards, concepts of water conservation and rainwater harvesting

CM3.3 Describe the aetiology and basis of water borne diseases /jaundice/hepatitis/ diarrheal diseases

CM3.4 Describe the concept of solid waste, human excreta and sewage Disposal

CM3.5 Describe the standards of housing and the effect of housing on health

CM3.6 Describe the role of vectors in the causation of diseases. Also discuss National Vector Borne disease Control Program

CM3.7 Identify and describe the identifying features and life cycles of vectors of Public Health importance and their control measures

CM3.8 Describe the mode of action, application cycle of commonly used insecticides and rodenticides

CM4.1 Describe various methods of health education with their advantages and limitations

CM4.2 Describe the methods of organizing health promotion and education and counselling activities at individual family and community settings

CM4.3 Demonstrate and describe the steps in evaluation of health promotion and education program

CM5.1 Describe the common sources of various nutrients and special nutritional requirements according to age, sex, activity, physiological conditions

CM5.2 Describe and demonstrate the correct method of performing a nutritional assessment of individuals, families and the community by using the appropriate method

CM5.3 Define and describe common nutrition related health disorders

(including macro-PEM, Micro-iron, Zn, iodine, Vit. A), their control and management

CM5.4 Plan and recommend a suitable diet for the individuals and families based on local availability of foods and economic status, etc in a simulated environment

CM5.5 Describe the methods of nutritional surveillance, principles of nutritional education and rehabilitation in the context of sociocultural factors.

CM5.6 Enumerate and discuss the National Nutrition Policy, important national nutritional Programs including the Integrated Child Development Services Scheme (ICDS) etc

CM5.7 Describe food hygiene

CM5.8 Describe and discuss the importance and methods of food fortification and effects of additives and adulteration

CM6.1 Formulate a research question for a study

CM6.2 Describe and discuss the principles and demonstrate the methods of collection, classification, analysis, interpretation and presentation of statistical data

CM6.3 Describe, discuss and demonstrate the application of elementary statistical methods including test of significance in various study designs

CM6.4 Enumerate, discuss and demonstrate Common sampling techniques, simple statistical methods, frequency distribution, measures of central tendency and dispersion

CM7.1 Define Epidemiology and describe and enumerate the principles, concepts and uses

CM7.2 Enumerate, describe and discuss the modes of transmission and measures for prevention and control of communicable and noncommunicable diseases

CM7.3 Enumerate, describe and discuss the sources of epidemiological data

CM7.4 Define, calculate and interpret morbidity and mortality indicators based on given set of data

CM7.5 Enumerate, define, describe and discuss epidemiological study designs

CM7.6 Enumerate and evaluate the need of screening tests S

CM7.7 Describe and demonstrate the steps in the Investigation of an epidemic of communicable disease and describe the principles of control measures

CM7.8 Describe the principles of association, causation and biases in epidemiological studies

CM7.9 Describe and demonstrate the application of computers in epidemiology

CM8.1 Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for communicable diseases

CM8.2 Describe and discuss the epidemiological and control measures including the use of essential laboratory tests at the primary care level for Non Communicable diseases (diabetes, Hypertension, Stroke, obesity and cancer etc.)

CM8.3 Enumerate and describe disease specific National Health Programs including their prevention and treatment of a case

CM8.4 Describe the principles and enumerate the measures to control a disease epidemic

CM8.5 Describe and discuss the principles of planning, implementing and evaluating control measures for disease at community level bearing in mind the public health importance of the disease

CM8.6 Educate and train health workers in disease surveillance, control & treatment and health education

CM8.7 Describe the principles of management of information systems

CM9.1 Define and describe the principles of Demography, Demographic cycle, Vital statistics

CM9.2 Define, calculate and interpret demographic indices including birth rate, death rate, fertility rates sessions

CM9.3 Enumerate and describe the causes of declining sex ratio and its social and health implications

CM9.4 Enumerate and describe the causes and consequences of population explosion and population dynamics of India.

CM9.5 Describe the methods of population control

CM9.6 Describe the National Population Policy

CM9.7 Enumerate the sources of vital statistics including census, SRS,NFHS, NSSO etc

CM10.1 Describe the current status of Reproductive, maternal, newborn and Child Health

CM10.2 Enumerate and describe the methods of screening high risk groups and common health problems

CM10.3 Describe local customs and practices during pregnancy, childbirth, lactation and child feeding practices

CM10.4 Describe the reproductive, maternal, newborn & child health (RMCH); child survival and safe motherhood interventions

CM10.5 Describe Universal Immunization Program; Integrated Management of Neonatal and Childhood Illness (IMNCI) and other existing Programs.

CM10.6 Enumerate and describe various family planning methods, their advantages and shortcomings

CM10.7 Enumerate and describe the basis and principles of the FamilyWelfare Program including the organization, technical and operational aspects

CM10.8 Describe the physiology, clinical management and principles of adolescent health including ARSH

CM10.9 Describe and discuss gender issues and women empowerment

CM11.1 Enumerate and describe the presenting features of patients with occupational illness including agriculture

CM11.2 Describe the role, benefits and functioning of the employees state insurance scheme

CM11.3 Enumerate and describe specific occupational health hazards, their risk factors and preventive measures

CM11.4 Describe the principles of ergonomics in health preservation

CM11.5 Describe occupational disorders of health professionals and their prevention & management

CM12.1 Define and describe the concept of Geriatric services K KH Y Lecture, Small group

Discussion

CM12.2 Describe health problems of aged population

CM12.3 Describe the prevention of health problems of aged population

CM12.4 Describe National program for elderly

CM13.1 Define and describe the concept of Disaster management

CM13.2 Describe disaster management cycle

CM13.3 Describe man made disasters in the world and in India

CM13.4 Describe the details of the National Disaster management Authority

CM14.1 Define and classify hospital waste

CM14.2 Describe various methods of treatment of hospital waste

CM14.3 Describe laws related to hospital waste management

CM15.1 Define and describe the concept of mental Health

CM15.2 Describe warning signals of mental health disorder

CM15.3 Describe National Mental Health program

CM16.1 Define and describe the concept of Health planning

CM16.2 Describe planning cycle

CM16.3 Describe Health management techniques

CM16.4 Describe health planning in India and National policies related to health and health planning

CM17.1 Define and describe the concept of health care to community

CM17.2 Describe community diagnosis

CM17.3 Describe primary health care, its components and principles

CM17.4 Describe National policies related to health and health planning and millennium development goals

CM17.5 Describe health care delivery in India

CM18.1 Define and describe the concept of International health

CM18.2 Describe roles of various international health agencies

CM19.1 Define and describe the concept of Essential Medicine List (EML)

CM19.2 Describe roles of essential medicine in primary health care

CM19.3 Describe counterfeit medicine and its prevention

CM20.1 List important public health events of last five years

CM20.2 Describe various issues during outbreaks and their prevention

CM 20.3 Describe any event important to Health of the Community

CM 20.4 Demonstrate awareness about laws pertaining to practice of medicine such as Clinical establishment Act and Human Organ Transplantation Act and its implications

Content extracted from

[https://kgmu.org/upload_file/Common_file/Revised BDS Course Regulation 2007.pdf](https://kgmu.org/upload_file/Common_file/Revised_BDS_Course_Regulation_2007.pdf) (pg 82-86)

BDS CURRICULUM: Topics related to Cross cutting issues

FORENSIC ODONTOLOGY (30 hrs of instruction)

Definition

Forensic is derived from the Latin word forum, which means 'court of law.' Odontology literally implies 'the study of teeth.' Forensic odontology, therefore, has been defined by the Fédération Dentaire International (FDI) as "that branch of dentistry which, in the interest of justice, deals with the proper handling and examination of dental evidence, and with the proper evaluation and presentation of dental findings."

Objectives of the undergraduate curriculum

At the end of the programme, the dental graduate should:

1. Have sound knowledge of the theoretical and practical aspects of forensic odontology.
2. Have an awareness of ethical obligations and legal responsibilities in routine practice and forensic casework.
3. Be competent to recognise forensic cases with dental applications when consulted by the police, forensic pathologists, lawyers and associated professionals.
4. Be competent in proper collection of dental evidence related to cases of identification, ethnic and sex differentiation, age estimation and bite marks.
5. Be able to assist in analysis, evaluation, and presentation of dental facts within the realm of law.

Curriculum for forensic odontology

1. Introduction to forensic dentistry
 - Definition and history
 - Recent developments and future trends
2. Overview of forensic medicine and toxicology
 - Cause of death and postmortem changes
 - Toxicological manifestations in teeth and oral tissues
3. Dental identification
 - Definition
 - Basis for dental identification
 - Postmortem procedures
 - Dental record compilation and interpretation
 - Comparison of data, and principles of report writing
 - Identification in disasters and handling incinerated remains
 - Postmortem changes to oral structures
4. Maintaining dental records
 - Basic aspects of good record-keeping
 - Different types of dental records
 - Dental charts
 - Dental radiographs
 - Study casts

- Denture marking
- Photographs
 - Dental notations
 - Relevance of dental records in forensic investigation
- 5. Age estimation
 - Age estimation in children and adolescents
 - Advantages of tooth calcification over 'eruption' in estimating age
 - Radiographic methods of Schour & Massler, Demirjian et al
 - Age estimation in adults
 - Histological methods – Gustafson's six variables and Johanson's modification, Bang & Ramm's dentine translucency
 - Radiographic method of Kvaal et al
 - Principles of report writing
- 6. Sex differentiation
 - Sexual dimorphism in tooth dimensions (Odontometrics)
- 7. Ethnic variations ('racial' differences) in tooth morphology
 - Description of human population groups
 - Genetic and environmental influences on tooth morphology
 - Description of metric and non-metric dental features used in ethnic differentiation
- 8. Bite mark procedures
 - Definition and classification
 - Basis for bite mark investigation
 - Bite mark appearance
 - Macroscopic and microscopic ageing of bite marks
 - Evidence collection from the victim and suspect of bite mark
 - Analysis and comparison
 - Principles of report writing
- Animal bite investigation
- 9. Dental DNA methods
 - Importance of dental DNA evidence in forensic investigations
 - Types of DNA and dental DNA isolation procedures
 - DNA analysis in personal identification
 - Gene-linked sex dimorphism
 - Population genetics
- 10. Jurisprudence and ethics
 - Fundamentals of law and the constitution
 - Medical legislation and statutes (Dental and Medical Council Acts, etc)
 - Basics of civil law (including torts, contracts and consumer protection act)
 - Criminal and civil procedure code (including expert witness requirement)
 - Assessment and quantification of dental injuries in courts of law
 - Medical negligence and liability
 - Informed consent and confidentiality
 - Rights and duties of doctors and patients
 - Medical and dental ethics (as per Dentists' Act)

BEHAVIOURAL SCIENCES (20 hrs of instruction)

GOAL:

The aim of teaching behavioural sciences to undergraduate student is to impart such knowledge & skills that may enable him to apply principles of behaviour –

- a) For all round development of his personality
- b) In various therapeutic situations in dentistry.

The student should be able to develop skills of assessing psychological factors in each patient, explaining stress, learning simple counselling techniques, and improving patients compliance behaviour.

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OBJECTIVES:

A) KNOWLEDGE & UNDERSTANDING:

At the end of the course, the student shall be able to:

- 1) Comprehend different aspects of normal behaviour like learning, memory, motivation, personality & intelligence.
- 2) Recognise difference between normal and abnormal behaviour.
- 3) Classify psychiatric disorders in dentistry.
- 4) Recognise clinical manifestations of dental phobia, dental anxiety, facial pain, orofacial manifestations of psychiatric disorders, and behavioural problems in children. Addictive disorders, psychological disorders in various dental departments.
- 5) Should have understanding of stress in dentistry and knowledge of simple counselling techniques.
- 6) Have some background knowledge of interpersonal, managerial and problem solving skills which are an integral part of modern dental practice.
- 7) Have knowledge of social context of dental care.

B) SKILLS

The student shall be able to:

- 1) Interview the patient and understand different methods of communication skills in dentist - patient relationship.
- 2) Improve patients compliance behaviour.
- 3) Develop better interpersonal, managerial and problem solving skills.
- 4) Diagnose and manage minor psychological problems while treating dental patients.

INTEGRATION:

The training in Behavioural sciences shall prepare the students to deliver preventive, promotive, curative and rehabilitative services to the care of the patients both in family and community and refer advanced cases to specialised psychiatric hospitals.

Training should be integrated with all the departments of Dentistry, Medicine, Pharmacology, Physiology and Biochemistry.

PSYCHOLOGY:

1. Definition & Need of Behavioural Science. Determinants of Behaviour. Hrs 1 Scope of Behavioural Science.
2. Sensory process & perception perceptual process- clinical applications.
3. Attention - Definition - factors that determine attention. Clinical application.
4. Memory - Memory process - Types of memory , Forgetting:
Methods to improve memory, Clinical assessment of memory & clinical applications.
5. Definition - Laws of learning

Type of learning. Classical conditioning, operant conditioning, cognitive learning, Insight learning, social learning, observational learning, principles of learning– Clinical application.

6. Intelligence- Definition: Nature of intelligence stability of intelligence
Determinants of intelligence, clinical application
7. Thinking - Definition: Types of thinking, delusions, problem solving
8. Motivation - Definition: Motive, drive, needs classification of motives
9. Emotions - Definition differentiation from feelings – Role of hypothalamus, Cerebral cortex, adrenal glands ANS. Theories of emotion, Types of emotions.

Personality. Assessment of personality: Questionnaires, personality inventory, rating scales, Interview projective techniques – Rorshach ink blot test , RAT, CAT

SOCIOLOGY:

Social class, social groups – family, types of family, types of marriages, communities and Nations and institutions.

ETHICS (20 hrs. of instruction)

Introduction:

There is a definite shift now from the traditional patient and doctor relationship and delivery of dental care. With the advances in science and technology and the increasing needs of the patient, their families and community, there is a concern for the health of the community as a whole. There is a shift to greater accountability to the society. Dental specialists like the other health professionals are confronted with many ethical problems. It is therefore absolutely necessary for each and every one in the health care delivery to prepare themselves to deal with these problems. To accomplish this and develop human values Council desires that all the trainees undergo ethical sensitization by lectures or discussion on ethical issues, discussion of cases with an important ethical component.

Course content:

Introduction to ethics –

- what is ethics?
- What are values and norms?
- How to form a value system in one's personal and professional life?
- Hippocratic oath.
- Declaration of Helsinki, WHO declaration of Geneva, International code of ethics, DCI Code of ethics.

Ethics of the individual –

The patient as a person.

Right to be respected

Truth and confidentiality

Autonomy of decision

Doctor Patient relationship

Profession Ethics –

Code of conduct

Contract and confidentiality

Charging of fees, fee splitting

Prescription of drugs

Over-investigating the patient

Malpractice and negligence

Research Ethics –

Animal and experimental research/humanness

Human experimentation

Human volunteer research-informed consent

Drug trials

Ethical workshop of cases

Gathering all scientific factors

Gathering all value factors

Identifying areas of value – conflict, setting of priorities

Working our criteria towards decisions