OFFICE OF THE PHARMACOLOGY DEPARTMENT
Subharti Medical College
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A constituent college of
SWAMI VIVEKANAND SUBHARTI UNIVERSITY
(Established under U.P. Govt. Act no. 29 of 2008 and approved under section 2(f) of UGC Act 1956)

Ref. no. : Med/Pharma/2025/ LET2503188364l0

Date: 17.03.2025

Minutes of Meeting of Board of Studies held on 12.03.2025

A meeting of Board of Studies was held on 12.03.2025 from 12 noon onwards in the office of the Head of the Department of Pharmacology and wad chaired by Dr. Surabhi Gupta, Chairperson, Board of Studies.

The following members were present during the meeting:

1. Dr. Surabhi Gupta
2. Dr. Anand K. Shukla
3. Dr. G.M. Loan
4. Dr. Rajeev Ranjan Sharma
5. Dr. Navdeep Singh

Internal Cognate Member:
Dr. Anita Pandey, Professor and Head, Department of Microbiology, SMC, Meerut

Following member was not able to mark their presence for meeting –
Dr. Monica Sharma, Professor and Head, Department of Pharmacology, LLRM, Medical College, Meerut

The Chairperson, Board of Studies welcomed all the members and thanked outside expert.

The following agendas were discussed during the meeting:

Agenda Item No. 1.

Agenda: To confirm the minutes of the Board of Studies meeting held on 06.09.2023.

Discussion: Nil

Resolution: The members confirmed the minutes of the previous Board of Studies meeting.

Agenda Item No. 2.

Agenda: To report Action Taken on the minutes of the Board of Studies held on 06.09.2023.

Discussion: Nil

Resolution: The members noted the action taken on the minutes of the previous Board of Studies meeting.

Agenda Item No. 3.

Agenda: Introduction of any new value-added course.

Discussion: Discussed

Resolution: No new value added course is to be introduced in academic year 2025, because of strict SOPs of Value Added Course given by University.

Agenda Item No. 4.

Agenda: Any change in competencies as per the CBME guidelines for upcoming session.

Discussion: Discussed

Resolution: CBME guidelines for UG 2024 were discussed in detail as follows:

- Number of topics have increased to 10 from earlier 5 and no. of competencies to 92 from earlier 64.
- Number of competencies that require certification are 11, previously were 4.
- Topics of practical Pharmacology like clinical pharmacy, Experimental Pharmacology, Communication have been clubbed in 'Applied Pharmacology'.
- New methods of learning have been introduced like prescription auditing, debate. **(Annexure1)**

NMC regulations for PG teaching 2023 was also discussed as follows:

- There have been amendments in e-logbooks, number of leaves, eligibility to appear in final examinations, new courses to be done by PGs and so on. **(Annexure 2)**

Agenda Item No. 5.

Agenda: Discussion on ongoing research activities.

Discussion: Discussed

Resolution: All faculty members were motivated to devote some time in research activities.

Agenda Item No. 6.

Agenda: Prescription analysis as per NABH guidelines

Discussion: discussed

Resolution: HOD informed all about receiving letter from Principal, SMC requesting to perform prescription auditing of clinicians of CSSH as per NABH guidelines every month. It was decided that postgraduate students and tutors of department will be visiting various OPDs of hospital and will collect around 10 prescriptions per OPD. These prescriptions will then be analyzed and report sent to principal office.

Sign and Stamp of Chairman

CBME – 2024

Annexure - 1

PHARMACOLOGY (CODE: PH)

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify p
PHARMACOLOGY (Topics – 10, Competencies – 92)							
	Topic 1: General Pharmacology (GP)	**Number of competencies: (13)**			**Number of competencies that require certification : (04)**		
PH1.1	Describe the principles of pharmacology, pharmacotherapeutics and define various terms in pharmacology.	K	KH	Y	LGT/ SGT	Written, Tutorial	
PH1.2	Describe evidence based medicine and rational use of drugs & discuss why these are relevant to therapeutics.	K	KH	Y	LGT/ SGT	Written, Tutorial	
PH1.3	Describe nomenclature of drugs i.e., generic, branded drugs and scheduled drugs, explaining the utility of the nomenclature, cost effectiveness and use.	K	KH	Y	LGT/ Practical	Written, Tutorial	
PH1.4	Identify the common drug formulations and drug delivery systems, demonstrate their use and describe their advantages and disadvantages.	K,S,A,C	KH, SH	Y	SGT, DOAP, role plays/ Simulations (mannequins, hybrid, computer)	Written/ Viva voce / Tutoria /OSPE/ direct observation	1
PH1.5	Describe various routes of drug administration, their advantages and disadvantages and demonstrate administration of, e.g., SC, IV, IM, SL, rectal, spinal, sublingual, intranasal sprays and inhalers	K, S,A,C	KH, SH	Y	SGT, videos, DOAP, simulations, hybrid models	Written/ Viva voce/Tutorial/ OSPE	2
PH1.6	Describe salient features of absorption, distribution, metabolism and excretion of drugs with emphasis on various routes of drug administration	K	KH	Y	LGT/ SGT, CBL, Simulations, practical exercises, Graphs, Flipped class room	Written/ Tutorial	
PH1.7	Describe various principles of mechanism of action of drugs	K	KH	Y	LGT, Small Group discussion, Demonstration	Written/Viva voce/ OSPE	
PH1.8	Demonstrate the mechanism of action & effects of common prototype drugs on human body using computer assisted learning	S,K	KH/SH	Y	Animations, videos	OSPE	

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify p
PH 1.9	Select rational drug combinations based on the pharmacokinetics/pharmacodynamic (PK/PD) parameters with emphasis on synergism, antagonism, 'therapeutic efficacy', risk benefit ratio	K	KH,SH	Y	LGT, SGT, demonstrations, CBL, Flipped class room	Written, OSPE, Viva voce/Tutorial	
PH1.10	Describe changes in pharmacology of drugs in geriatric, pediatric and special situations such as Pregnancy, lactation, hepatic and renal disorders and adjust the drug treatment accordingly.	K, S, A	KH, SH	Y	LGT, CBL/ PBL	Written/ Tutorial, OSPE	
PH 1.11	Define Adverse Drug Reactions (ADRs) & their types. Identify the ADRs in the given case scenario and assess causality.	K	KH, SH	Y	LGT, SGT, CBL	Written, Viva voce/Tutorial, OSPE	
PH1.12	Define Pharmacovigilante its principles and demonstrate ADR reporting	K, S, C	KH, SH	Y	LGT, DOAP, CBL Can be covered in Pandemic module sessions	Written/ Viva voce OSPE	2
PH1.13	Identify and describe the management of drug interactions	K	KH, SH	Y	LGT, SGT/ CBL	Written/Viva/ Tutorial/ Prescription audit	1
	Topic 2 : Autonomic & Peripheral Nervous system, Autacoids	**Number of competencies: (8)**			**Number of competencies that require certification : (NIL)**		
PH2.1	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of adrenergic and antiadrenergic drugs	K	KH	Y	LGT, SGT	Written/ Tutorial	
PH2.2	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of cholinergic and anticholinergic drugs and demonstrate OPC poisoning management	K,S,A,C	KH, SH	Y	LGT, SGT, Simulations, Role play, CBL	Written/ Tutorial/ Direct observations	
PH 2.3	Explain the rationale and demonstrate the emergency use of various sympathetic and parasympathetic drug agonists/antagonists (like Noradrenaline/ Adrenaline/Dopamine/Dobutamine, Atropine) in case-based scenarios	S,A,C	KH,SH	Y	CBL, SGT, Simulations,	Written/ Viva/ Tutorial/ OSCE	

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify p
PH2.4	Explain salient pharmacokinetics, pharmacodynamics, therapeutic usgs, adverse drug reactions of skeletal muscle relaxants	K	KH	Y	LGT, SGT	Written/ Viva voce/Tutorial	
PH2.5	Explain types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of local anaesthetics (LA) & demonstrate various methods of administration of LA	K, S	KH, SH	Y	LGT, SGT, OOAP in simulated environment	Written/ Viva voce/Tutorial, OSPE	
PH2.6	Explain types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of anti-histaminics and explain management of common cold & allergic merits.	K	KH	Y	LGT, CBL	Written/ Viva voce/ Tutorial	
PH2.7	Define pain and enumerate drugs used for pain. Explain salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of analgesics including NSAIDs (except opioids)	K	KH	Y	LGT, SGT, Flipped class room	Written/ Viva voce/Tutorial	
PH2.8	Devise management plan for a case of gout, arthritis and migraine using appropriate drugs	K, S	KH, SH	Y	LGT, CBL, PBL, prescription writing	Written/ Viva voce/Tutorial, prescription audit	
	Topic 3: Central Nervous system	**Number of competencies: (09)**			**Number of competencies that require certification : (NIL)**		
PH3.1	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of General anaesthetics, and pre-anaesthetic medications	K	KH	Y	LGT, SGT, Flipped class room	Written/ Tutorial	
PH3.2	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of different sedative and hypnotic agents and explain pharmacological basis of selection and use of different sedative and hypnotic agents	K	KH	Y	LGT, CBL/ PBL, prescription writing	Written/ Viva voce/Tutorial, prescription audit	
PH3.3	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used in epilepsy and devise management plan for a case of uncontrolled seizure	K, S,A,C	KH, SH	Y	LGT, CBL/PBL/ Bedside teaching, prescription writing	Written/ Viva voce/ Tutorial, prescription audit	

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/SH/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify p
PH3.4	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs of opioid analgesics and explain the special instructions for use of opioids.	K, C	KH, SH	Y	LGT, CBL /PBL / Bedside teaching	Written/ Viva voce/Tutorial/ Direct observation	
PH3.5	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for depression and psychosis, devise management plan for depressive and psychotic disorders	K, A, C	KH, SH	Y	LGT, CBL/PBL/ Bedside teaching, prescription writing	Written/ Viva voce/ prescription audit	
PH3.6	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used in anxiety disorders. Discuss about general goals of Pharmacotherapy for the management of above disorders	K, A,C	KH, SH	Y	LGT, CBD, Bedside teaching, prescription writing	Written/ Viva voce, prescription audit	
PH3.7	Explain types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for Parkinsonism and other neurodegenerative disorders. Write a prescription to manage a case of drug induced parkinsonism	K	KH	Y	LGT, Problem/ case-based group discussion, prescription writing	Written/ viva voce, prescription audit	
PH3.8	Identify and manage methanol poisoning and chronic ethanol intoxication	K, S,A,C	KH, SH	Y	LGT, SGT, CBL, bedside teaching	Written/ Viva voce, direct observation	
PH3.9	Describe the drugs that are abused and cause addiction (dependence, addiction, stimulants, depressants, psychedelics, drugs used for criminal offences). Explain the process and steps for management of drug de addiction	K	KH	Y	LGT, SGT/CBL Simulations, Flipped class room	Written/ Viva voce/Tutorial	
	Topic 4: Cardiovascular system & Blood	**Number of competencies: (11)**			**Number of competencies that require certification : (NIL)**		
PH4.1	Explain types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for different anaemias and thrombocytopenia.	K	KH	Y	LGT, integration module, CBL, SDL, Prescription writing	Written/ Tutorial/ Prescription audit	Anemia Integration

PH4.2	Explain types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs acting on coagulation system (Coagulants/anticoagulants) and devise a plan to monitor therapy and management of adverse effects.	K, A, C	KH, SH	Y	LGT, SGT, bedside teaching	Written/Viva voce/ Direct observation	

Number	COMPETENCY -The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify p
PH4.3	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of Fibrinolytics and Antifibrinolytic agents.	K	KH	Y	LGT, SGT	Written/Tutorial	
PH4.4	Explain types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of Antiplatelets agents.	K	KH	Y	LGT, CBL, Flipped class room	Written/Tutorial	
PH4.5	Explain types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of Diuretics, antidiuretics-vasopressin and analogues	K	KH	Y	LGT, SGT	Written/ Tutorial	
PH4.6	Explain salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs modulating renin angiotensin aldosterone system.	K	KH	Y	LGT, SGT	Written/ Tutorial	
PH4.7	Explain types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for the management of hypertension Devise plan for pharmacologic management of hypertension with Diabetes, Pregnancy induced hypertension and hypertensive emergency and urgency	K	KH	Y	LGT, CBL/PBL, prescription writing, Simulations	Written/ Viva voce/Tutorial prescription audit/ Direct observations	
PH4.8	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for the management of ischemic heart disease (stable, unstable angina and myocardial infarction), peripheral vascular disease and devise management plan for a patient of acute myocardial infarction	K, S,A,C	KH, SH	Y	LGT, CBL, Simulations, prescription writing	Written/ Viva voce/ Direct observations, audit of prescriptions	

PH4.9	Explain salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for the management of heart failure. Devise management plan for heart failure patients and describe the strategies to prevent long term complications of heart failure.	K, A,C	KH	Y	LGT, CBL, PBL, SDL, prescription writing	Written/ Viva voce/ prescription audit	

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify p
PH4.10	Explain salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for cardiac arrhythmias. Devise a plan to manage a patient with supraventricular, ventricular arrhythmias, cardiac arrest and fibrillations	K,S, A,C	KH, SH	Y	LGT, SGT, CBL, SDL, simulations, prescription writing	Written/ Viva voce/ direct observation/ prescription audit	
PH4.11	Explain salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for the management of dyslipidaemias and enumerate drugs leading to dyslipidaemias	K	KH	Y	LGT, SGT, CBL	Written/ Viva voce/ Tutorial	
	Topic B: Respiratory system	Number of competencies: (2)			Number of competencies that require certification : (NIL)		
PH5.1	Devise management of various stages of Bronchial asthma, COPD. Explain salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for the management of Bronchial asthma, COPD and Rhinitis.	K, A, C	KH /SH	Y	LGT, SGT, Demonstration of devices used in Br Asthma, Prescription writing	Written/ Viva voce/ OSPE/ Direct observation, Prescription audit	
PH5.2	Explain types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for cough management. Describe management of dry & productive cough	K	KH	Y	LGT , SGT, Flipped class room	Written/Tutorial	
	Topic C: Gastrointestinal system	Number of competencies: (5)			Number of competencies that require certification : (NIL)		
PH6.1	Explain types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used in Acid peptic disease: including Peptic Ulcers, GERD and devise a management plan for a case of peptic ulcer.	K,	KH	Y	LGT, SGT, Prescription writing	Written/ Viva voce/ Tutorial, Prescription audit	

PH6.2	Describe types, salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of prokinetics & drugs used for emesis and antiemetics.	K	KH	Y	LGT, SGT	Written/ Viva voce/ Tutorial	

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P
PH6.3	Describe salient pharmacokinetics, pharmacodynamics, therapeutic uses, adverse drug reactions of drugs used for the management of diarrhoea and devise pharmacotherapeutic plan to manage acute and chronic diarrhoea in adults and children.	K, C	KH, SH	Y	LGT, SGT, bedside teaching, SDL	Written/ Viva voce, Direct observation, OSPE	
PH6.4	Describe salient pharmacokinetics, pharmacodynamics, adverse drug reactions of drugs used for the management of constipation and devise management plan for a case of constipation	K, C	KH, C	N	LGT, SGT, Direct observation	Written/ Tutoria	
PH6.5	Describe salient pharmacokinetics, pharmacodynamics, adverse drug reactions of drugs used for the management of Inflammatory Bowel Disease and Irritable Bowel Disorders	K	KH	N	LGT, SGT	Written/ Tutoria	
	Topic 7: Endocrine system	Number of competencies: (9)			Number of competencies that require certification : (NIL)		
PH7.1	Describe the types, kinetics, dynamics, adverse drug reactions of drugs used in diabetes mellitus and devise management for an obese and non-obese diabetic patient & also comment on prevention of complications of the diabetes.	K,A	KH	Y	LGT, CBL, SDL, SGT, Prescription writing	Written/ Viva voce/ tutorial, prescription audit	
PH7.2	Describe the types, kinetics, dynamics, therapeutic uses, adverse drug reactions of drugs used in osteoporosis and devise management plan for a female and male patient with osteoporosis.	K	KH	Y	LGT, CBL/ SDL/ SGT, Prescription writing	Written/ Viva voce/ Tutorial, prescription audit	
PH7.3	Describe the types, kinetics, dynamics, adverse drug reactions of drugs used in thyroid Disorders and devise a management plan for a case with thyroid Disorder.	K	KH	Y	LGT, CBL, SDL, SGT, Prescription writing	Written/ Tutorial, prescription audit	
PH7.4	Describe the types, mechanisms of action, adverse effects, indications and contraindications of the drugs which modify the release of Anterior Pituitary Hormones	K	KH	N	LGT	Written/ Tutorial	
PH7.5	Explain the types, kinetics, dynamics, adverse effects, indications and contraindications of corticosteroids and communicate to patient the appropriate use of corticosteroids	K, A,C	KH, SH	Y	LGT, SGT/ CBL/ PBL, Role play	Written/ Viva voce/tutorial, Direct observation, OSPE	

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P
PH7.6	Describe the types, kinetics, dynamics, adverse effects, indications and contraindications of Androgens and drugs used of Erectile Dysfunction	K	KH	N	LGT, SGT/ CBL	Written/ tutorial	
PH7.7	Explain the types, kinetics, dynamics, adverse effects, indications and contraindications of drugs which modify Female Reproductive Functions including contraceptives. Explain the important instruction for use of female and male contraceptives	K,A,C	KH, SH	Y	LGT, SDL, CBL, PBL, SGT, Role play	Written/ Viva voce/tutorial, OSPE	
PH7.8	Explain the types, kinetics, dynamics, adverse effects, indications and contraindications of uterine relaxants and stimulants.	K	KH	Y	LGT, CBL, Flipped class room	Written/ Tutorial	
PH7.9	Describe drugs used for treatment of infertility	K	KH	Y	LGT, CBL	Written/ tutorial	
	Topic 8: Chemotherapy	Number of competencies: (11)			Number of competencies that require certification : (NIL)		
PH8.1	Discuss general principles of chemotherapy with emphasis on antimicrobial resistance.	K	KH	Y	LGT	Written/ Viva voce/tutorial, Pandemic module	
PH8.2	Discuss rational use of antimicrobials and describe antibiotic stewardship program of your institute	K	KH	Y	LGT, CBL, SGT, Flipped class room	Written/ Viva voce/tutorial, Pandemic module	

PHE.3	Explain the kinetics, dynamics, adverse effects, indications of the following antibacterial drugs: Sulphonamides Quinolones, Beta-lactams, Macrolides, Tetracycline, Aminoglycosides, and newer antibacterial drugs	K	KH	Y	LGT, CBL, SGT	Written/Viva voce/tutorial	
PHE.4	Devise a pharmacotherapeutic plan for UTI and STDs and explain to patient the instructions and adherence to treatment.	K,A,C	KH, SH	Y	LGT, CBL/ PBL/ SGT, role play, Prescription writing	Written/Viva voce/tutorial OSPE/ Prescription audit, Direct observation	

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify p
PHE.5	Explain the types, kinetics, dynamics, therapeutic uses and adverse effects of drugs used in tuberculosis. Devise management plan for tuberculosis treatment in various categories.	K	KH, SH	Y	LGT, CBL, PBL, SDL, Prescription writing	Written/ Viva voce/tutorial, Prescription audit	
PHE.6	Discuss the types, kinetics, dynamics, adverse effects for drugs used for Leprosy and outline management of Lepra reactions	K	KH	Y	LGT/CBL, Prescription writing	Written/Viva voce/tutorial Prescription audit	
PHE.7	Discuss the types, kinetics, dynamics, adverse effects of drugs used for following Protozoal / Vector borne diseases: 1. Amoebiasis 2. Kala-azar 3. Malaria 4. Filariasis	K	KH	Y	LGT SGT, CBL, Prescription writing	Written/Viva voce/tutorial, Prescription audit	
PHE.8	Explain the types, kinetics, dynamics, adverse effects of drugs used for fungal infections	K	KH	Y	LGT SGT, CBL, Prescription writing	Written/Viva voce/tutorial Prescription	
PHE.9	Discuss the types, kinetics, dynamics, adverse effects of drugs used for Intestinal Helminthiasis	K	KH	Y	LGT SGT, CBL, Prescription writing	Written/Viva voce, Prescription	
PHE.10	Discuss the types, kinetics, dynamics, adverse effects, indications and contraindications of drugs used for viral diseases including HIV	K	SH	Y	LGT SGT, CBL, Prescription writing	Written/Viva voce/tutorial. Prescription	

PHE.11	Describe the types, kinetics, dynamics, adverse effects, indications and contraindications of anti-cancer drugs . Devise plan for amelioration of anticancer drug induced toxicity.	K	KH	N	LGT, SGT, CBL	Written/tutorial	
	Topic 9: Miscellaneous	Number of competencies: (7)			Number of competencies that require certification : (NIL)		
PH9.1	Describe the types, kinetics, dynamics, therapeutic uses, adverse drug reactions of immunomodulators	K	KH	N	LGT/ SGT	Written/ Viva voce /tutorial	
PH9.2	Describe management of common drug poisonings, insecticides, common stings and bites	K	KH	Y	LGT, CBL, Simulations	Written/Viva voce/tutorial, direct observations	

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify p
PH9.3	Describe chelating agents and make a plan for management of heavy metal poisoning	K	KH	N	LGT, CBL	Written/ tutorial	
PH9.4	Describe basics of vaccine use and types of vaccines	K	KH	Y	SGT, LGT	Written/ tutorial	
PH9.5	Describe types, precautions and uses of antiseptics and disinfectants	K	KH	Y	SGT, LGT	Written/ tutorial	
PH9.6	Describe drugs used in various skin disorders like acne vulgaris, scabies , pediculosis, psoriasis including sunscreens	K	KH	N	LGT, Prescription writing	Written/ tutorial, Prescription audit	
PH9.7	Describe drugs used in glaucoma and other ocular disorders including topical (ocular) drug delivery systems	K	KH	N	LGT	Written/ tutorial	
	Topic 10: Applied Pharmacology	Number of competencies: (17)			Number of competencies that require certification : (7)		
PH10.1	Compare and contrast different sources of drug information and update on latest information on drugs	K, C	KH, SH	Y	SGT, Practicals, Debate	Written, OSPE	2
PH10.2	Perform a critical evaluation of the drug promotional literature and interpret the package insert information contained in the drug package	K	KH/SH	Y	CBL, SGT, Debate	Written, OSPE	1
PH10.3	To prepare and explain a list of P-drugs for a given case/condition	S,K,C	SH/KH	Y	CBL, SGT	OSPE, written	2

PH10.4	Describe parts of a correct, rational and legible prescription and write rational prescriptions for the provided condition. (examples of conditions to be used are given with other relevant competencies)	K	KH, SH	Y	Practical, DOAP, CBL, prescription writing	Written/ Viva voce/tutorial prescription audit	5
PH10.5	Identify and apply the legal and ethical regulation of prescribing drugs especially when prescribing for controlled drugs, off-label medicines, and prescribing for self, close family and friends	K	KH	Y	SGT, CBL	short note/ Viva voce/tutorial	
PH10.6	Perform a critical appraisal of a given prescription and suggest ways to improve it	SK	KH	Y	CBL, SGT, prescription critique	Written, Viva voce, OSPE	
PH10.7	Describe Pharmacogenomics and Pharmacoeconomics and manage genomic & economic issues in drug use and find out the price of given medication(s).	K	KH, SH	N	LGT, SGT,	Written/ Viva voce	

Number	COMPETENCY The student should be able to	Predominant Domain K/S/A/C	Level K/KH/S H/P	Core (Y/N)	Suggested Teaching Learning method	Suggested Assessment method	Number required to certify P
PH10.8	Describe Essential medicines, Fixed dose combination, Over the counter drugs and explain steps to choose essential medicines.	K	KH, SH	Y	SGT, DOAP, Debate	Written/ Viva voce/ OSPE	
PH10.9	Calculate the dosage of drugs for an individual patient, including children, elderly, pregnant and lactating women and patients with renal or hepatic dysfunction.	K,S	SH	Y	LGT, practical	Written/ OSPE	1
PH10.10	Identify when therapeutic drug monitoring is considered for a particular patient, determine timing of sampling and calculate revised dose.	K	KH	N	LGT, SGT/CBL	Written, OSPE	
PH10.11	Identify and apply drug Regulations principles, acts and legal aspects related of drug discovery and clinical use	K	KH/SH	Y	LGT, Visit to clinical research facility, Can be covered in Pandemic module sessions	Written/ Viva voce/ tutorial	
PH10.12	Describe overview of drug development including phases of clinical trials and Good Clinical Practice & reflect on the role of research in developing new drugs	K,A	KH	Y	LGT, SGT, Can be covered in Pandemic module sessions	Written/ Viva voce/ tutorial	

PH10.13	Demonstrate how to optimize interaction with pharmaceutical representative/media to get,disseminate authentic information on drugs	C,A,K	SH	Y	Role Play, Videos, actual encounters	Direct observation, OSPE	2
PH10.14	Communicate with the patient regarding optimal use of a drug therapy using empathy and professionalism e.g. Oral contraceptives, anti TB drugs etc.	A,C	SH	Y	Role Play, Videos, actual encounters	OSPE, Direct observation	
PH10.15	Describe methods to improve adherance to treatment and motivate patients with chronic diseases to adhere to the prescribed pharmacotherapy	K,C,A	SH	Y	Role Play, Videos, actual encounters	Written/ OSPE, Direct observation	2
PH10.16	Demonstrate an understanding of the caution in prescribing drugs likely to produce dependence and recommend the line of management	K,C	KH,SH	Y	SGT, CBL	Written/ OSPE, Direct observation	
PH10.17	Demonstrate ability to educate public & patients about various aspects of drug use including drug dependence and OTC drugs	A,C	SH	Y	Role Play, Videos, actual encounters, Plays	OSPE, Direct observation	

Annexure - 2

Postgraduate Medical Education Regulations 2023: A Critical Review

Introduction

The National Medical Commission (NMC) Gazette notified the "Postgraduate Medical Education Regulations, 2023" (PGMER-23) on December 29, 2023, which were released on the NMC website on January 4, 2024.[1] These regulations are going to replace the PGMER-2020, first time released on October 7, 2000, and amended up to May 2018.[2] Thus, new regulations for postgraduate medical training in India have been released after a gap of 23 years. For the last 3–4 years, the system has been made to run through an *ad hoc* mechanism of releasing circulars every now and then. During the intervening period, from May 2018 (the time when PGMER-2000 was last amended) to September 25, 2020 (the time when the NMC was established), most notifications were published for the addition of qualification as a prior requirement for different super-specialty courses. However, some major decisions were also taken by the Board of Governors in the Supersession of the Medical Council of India during this intervening period, thus bringing about a paradigm shift in postgraduate medical training in India [Box 1].

As one can well gauge from Box 1, these decisions scripted some of the defining moments in the history of postgraduate medical training in India. Since the inception of the NMC, many advisories and public notices have been issued. Most of these were related to providing relaxation to different postgraduate batches in qualification criteria for final university examinations in the form of – relaxation in presenting paper or poster, thesis submission date or committed sample size in thesis synopsis, online research methodology course, or relaxation in the criteria for appointment of external examiners, in the wake of prevalent COVID conditions.

Box 1: Major decisions taken by the Board of Governors in the Supersession of the Medical Council of India

Issuing Gazette notification to provide 5% reservation for the candidates with benchmark disabilities in accordance with the provisions of the Rights of Persons with Disabilities Act, 2016[3]

Issuing Gazette notification to redefine the teacher-to-student ratio for various postgraduate and super-specialty courses in government and nongovernment institutes[4]

Issuing Gazette notification for mandatory training in online research methodology courses for postgraduate students[5]

Issuing Gazette notification for mandatory training of postgraduate students at the district hospital for 3 months as DRP[6]

DRP: District residency program

Draft Regulations – Chronology

After the setting up of the NMC on September 25, 2020, the release of such a consolidated document in the form of PGMER-23 was much awaited, particularly when the draft of PGMER had been placed in the public domain for scrutiny, comments, and feedback of the public on more than one occasion. A brief chronology of the issuing of drafts of PGMER and related notices from September 2020 onward is depicted in Box 2.

As is evident from Box 2, a huge amount of labor, efforts, and time has been put-in for accurate drafting, and finally, to notify such a mammoth document, as per the aspirations of different stakeholders. The NMC and particularly, the Postgraduate Medical Education Board (PGMEB) deserve thunderous applause for the same.

Box 2: Chronology of issuing of drafts of the Postgraduate Medical Education Regulations and related notices

The first draft was posted on the NMC website as "Draft Postgraduate Medical Education Regulations, 2021" on July 29, 2021, and comments were asked on this draft from the general public till August 30, 2021[7,8]

Another document, with few changes marked in red font, was posted on the NMC website on October 5, 2021, as the "Postgraduate Medical Education Regulations, 2021."[9] This document was peculiar in the sense that the word "draft" was not used anywhere in the title of this document (thus giving an impression as if these are PGMER-2021), but the word "draft" was present in the whole document as "watermark." However, no notice was issued asking for comments of the general public on this document

After a gap of 2 years, the third draft in the form of the "Postgraduate Medical Education Regulations, 2023" was released on September 6, 2023, asking for comments of the general public within 10 days of publication of the draft (till September 16, 2023).[10] The last date for seeking comments was further extended to October 5, 2023[11]

NMC: National Medical Commission; PGMER-2023: Postgraduate Medical Education Regulations, 2023

Amendments

Whenever new regulations are notified, all stakeholders, including students, faculty, and administrators, are curious to know the changes being implemented through the new regulations. In the following sections, major changes in the chapter of 'postgraduate training' as cited in the PGMER-23 compared to PGMER-2000 have been discussed.

Recognition of New Programs

For the first time, the existence of Postdoctoral Certificate Courses (PDCC) and Postdoctoral Fellowship (PDF) courses has been accepted, and the duration of such courses has been documented. Furthermore, in Annexure-4 .

of the PGMER-23, the list of recognized PDCCs has been mentioned; however, Annexure-5, which was supposed to delineate the list of recognized PDF qualifications has been left blank. Moreover, the document is silent about the ways and means by which a super-specialist can seek admission in PDCC and PDF courses, although the admission procedure for broad-specialty and super-specialty has been documented in detail. Hopefully, more details, including the procedure and requirements, to start PDCC and PDF courses by medical institutes, will be notified in the near future.

Recognition of Mental Health of Postgraduate Students

It is heartening to note that the ongoing debate over the mental health of postgraduate students has been recognized by the NMC and the same has been reflected in the form of acceptance of reasonable working hours in a day for postgraduate students. Although the working hours have not been fixed, it has been very clearly expressed in the PGMER-23 that the postgraduate students will work for reasonable working hours and will be provided a reasonable time for rest in a day.

Academic Cell

In PGMER-2000, there was a provision for the establishment of an academic cell or curriculum committee (CC) in an institute, so as to implement the training program across all specialties. The same CC constituted for the undergraduate course under the curriculum implementation support program was doubling up the role for postgraduate courses also, in most of the institutes. Now, in PGMER-23, setting up of an academic cell has been made mandatory.

E-logbooks

Logbooks have been used historically for maintaining records and proof of learning/training in postgraduate training. PGMER-2000 mandated the use of logbooks which needed to be checked by the faculty members imparting the training (not fixed) periodically (periodicity not defined). However, PGMER-23 has mandated to maintain a dynamic e-logbook by PG students, which should be updated on a weekly basis and must be assessed and authenticated on a monthly basis by the PG guide imparting the training. Fixing the responsibility of guides to assess the logbooks and fixing the periodicity of such assessments are welcome steps, and at the same time, the introduction of dynamic e-logbooks is going to revolutionize PG medical training in this digital era.

Poster Presentation/Paper Presentation/Research Paper

In terms of the Gazette Notification dated December 9, 2009, clause 13.9 A was added in PGMER-2000, thus requiring a PG student to present one poster, to read one paper at a national/state conference, and to present one research paper that should be published/accepted for publication/sent for publication during the period of training, to be eligible for final university examination. This means that a student has to do three research-cum-publications-oriented activities. It is a known fact that PG students mostly conduct one research-related activity – their PG thesis work, and in most of the cases, thesis work gets completed only 8–9 months before final examinations, and it is only after the completion of thesis work that students use to present posters/papers. Now, presenting the same research work as a poster and a research paper at a state/national conference (even if on different occasions) looks preposterous. Moreover, expecting a PG student to write a thesis, present a poster, present a paper, and send a paper to a journal during the last 7–8 months of the training program is like asking for a moon. Accordingly, under prevalent conditions, this whole exercise is undertaken as an eyewash, without contributing substantially to the scientific evidence. In the recently released PGMER-23, these requirements have been marked as below:

A postgraduate student of a degree course in broad specialty/super-specialty will do at least one of the following to make him/her eligible to appear in his/her final examination:

a. *Poster presentation at a national/zonal/state conference of his/her specialty*
b. *Podium presentation at a national/zonal/state conference of his/her specialty*
c. *Have one research paper published/accepted for publication in the journal of his/her specialty as the first author.*

These changes will have both pros and cons. It will be advantageous for PG students as they will now need to undertake any one of the three activities – either present a poster or a paper at a conference or publish a paper in a journal, and not all three activities. Moreover, now, PG students will be designated as the "first author" in the paper originating from their own research work and will not be at the mercy of the supervisor for the same. However, PG students have to present a paper or poster now in the conference of their own specialty. Furthermore, the research paper needs to be at least accepted for publication in the journal of their specialty. This will be a bit tricky – finding a specialty journal for so many PG students across India from one specialty will be difficult. However, at the same time, this condition is not mandatory now, and this will also enforce students and supervisors to undertake good thesis research to get the paper accepted in the specialty journal.

New Courses/Changes in Existing Courses

In addition to the ongoing "Online Course on Research Methodology" and "District Residency Program," now, PG students are required to complete a "Course in Ethics," including "Good Clinical Practices" and "Good Laboratory Practices" (whichever relevant), and a course in "Basic Cardiac Life Support (BCLS)" and "Advanced