MAHATMA GANDHI UNIVERSITY
of
MEDICAL SCIENCES & TECHNOLOGY
JAIPUR

Syllabus

MD – PALLIATIVE MEDICINE(MD21)

(3 Years Post Graduate Degree Course)

Edition 2021-22

Notice

1. Amendment made by the National Medical Commission (NMC) of India in Rules/Regulations of Post Graduate Medical Courses shall automatically apply to the Rules/Regulations of the Mahatma Gandhi University of Medical Sciences & Technology (MGUMST), Jaipur.
2. The University reserves the right to make changes in the syllabus/books/guidelines, fees-structure or any other information at any time without prior notice. The decision of the University shall be binding on all.
3. The Jurisdiction of all court cases shall be Jaipur Bench of Hon'ble Rajasthan High Court only.

RULES & REGULATIONS
MD PALLIATIVE MEDICINE (MD21)
(3 Years Post Graduate degree course)

TITLE OF THE COURSE:
It shall be called Doctor of Medicine.

ELIGIBILITY FOR ADMISSION:
No candidate of any category (including NRI quota) shall be eligible for admission to MD/MS courses, if he or she has not qualified NEET PG (MD/MS) conducted by National Board of Examinations or any other Authority appointed by the Government of India for the purpose.

(1) General Seats

(a) Every student, selected for admission to postgraduate medical course shall possess recognized MBBS degree or equivalent qualification and should have obtained permanent Registration with the Medical Council of India, or any of the State Medical Councils or should obtain the same within one month from the date of his/her admission, failing which the admission of the candidate shall be cancelled;

(b) Completed satisfactorily one year's rotatory internship or would be completing the same before the date announced by the University for that specific year as per NMC rules after passing 3rd professional MBBS Part II Examination satisfactorily.

(c) In the case of a foreign national, the Medical Council of India may, on payment of the prescribed fee for registration, grant temporary registration for the duration of the postgraduate training restricted to the medical college/institution to which he/she is admitted for the time being exclusively for postgraduate studies; however temporary registration to such foreign national shall be subject to the condition that such person is duly registered as medical practitioner in his/her own country from which he has obtained his basic medical qualification and that his degree is recognized by the corresponding Medical Council or concerned authority.

(2) NRI Seats

(a) Students from other countries should possess passport, visa and exchange permits valid for the period of their course of study in this Institution and should also observe the regulations of both central and state governments regarding residential permits and obtain no-objection certificate from the same.

(b) The candidate should have a provisional "Student Visa". If he comes on any other visa and is selected for admission, he will have to first obtain a student visa from his country and then only he will be allowed to join the course. Therefore it is imperative to obtain provisional student visa before coming for Counseling.

(c) This clause is applicable to NRI/Foreign Students only.

CRITERIA FOR SELECTION FOR ADMISSION:

(1) NRI Quota

15% of the total seats are earmarked for Foreign National / PIO / OCI/ NRI / Ward of NRI/NRI sponsored candidates who would be admitted on the basis of merit obtained in NEET PG or any other criteria laid down by Central Government/NMC.

(2) Remaining Seats (Other than NRI Quota Seats)

(a) Admissions to the remaining 85% of the seats shall be made on the basis of the merit obtained at the NEET conducted by the National Board of Examinations or any other Authority appointed by the Government of India for the purpose.

(b) The admission policy may be changed according to the law prevailing at the time of admission.

COUNSELING/INTERVIEW:

(1) Candidates in order of merit will be called for Counseling/Interview and for verification of original documents and identity by personal appearance.

(2) Counseling will be performed and the placement will be done on merit-cum-choice basis by the Admission Board appointed by the Government of Rajasthan.

RESERVATION:

Reservation shall be applicable as per policy of the State Government in terms of scheduled caste, scheduled tribe, back ward class, special back ward class, women and handicapped persons.

ELIGIBILITY AND ENROLMENT:

Every candidate who is admitted to MD/MS course in Mahatma Gandhi Medical College & Hospital shall be required to get himself/herself enrolled and registered with the Mahatma Gandhi University of Medical Sciences & Technology (MGUMST) after paying the prescribed eligibility and enrolment fees.

The candidate shall have to submit an application to the MGUMST through Principal of College for the enrolment/eligibility along with the following original documents and the prescribed fees within two months of his/her admission or up to November 30 of the year of admission whichever is later without late fees. Then after, students will have to pay applicable late fees as per prevailing University Rules –

(a) MBBS pass Marks sheet/Degree certificate issued by the University (Ist MBBS to Final MBBS)

(b) Certificate regarding the recognition of medical college by the Medical Council of India.

(c) Completion of the Rotatory Internship certificate from a recognized college.

(d) Migration certificate issued by the concerned University.

(e) Date of Birth Certificate

(f) Certificate regarding registration with Rajasthan Medical Council / Medical Council of India / Other State Medical Council.

REGISTRATION

Every candidate who is admitted to MD/MS course in Mahatma Gandhi Medical College & Hospital shall be required to get himself/herself registered with the Mahatma Gandhi University of Medical Sciences & Technology after paying the prescribed registration fees.

The candidate shall have to submit application to the MGUMST through Principal of College for registration with the prescribed fees within two months of his/her admission or up to November 30 of the year of admission whichever is later without late fees. Then after, students will have to pay applicable late fees as per prevailing University Rules.

DURATION OF COURSE:

The course shall be of 3 years duration from the date of commencement of academic session.

PERIOD OF TRAINING:

The period of training for obtaining Post graduate degrees (MD/MS) shall be three completed years including the period of examination.

MIGRATION:

No application for migration to other Medical Colleges will be entertained from the students already admitted to the MD/MS course at this Institute.

METHODS OF TRAINING FOR MD/MS:

Method of training for MD/MS courses shall be as laid down by the Medical Council of India.

ONLINE COURSE IN RESEARCH METHODS

i. All postgraduate students shall complete an online course in Research Methods to be conducted by an Institute(s) that may be designated by the Medical Council of India by way of public notice, including on its website and by Circular to all Medical Colleges. The students shall have to register on the portal of the designated institution or any other institute as indicated in the public notice.
ii. The students have to complete the course by the end of their 2nd semester.
iii. The online certificate generated on successful completion of the course and examination thereafter, will be taken as proof of completion of this course
iv. The successful completion of the online research methods course with proof of its completion shall be essential before the candidate is allowed to appear for the final examination of the respective postgraduate course.
v. This requirement will be applicable for all postgraduate students admitted from the academic year 2019-20 onwards

ATTENDANCE, PROGRESS AND CONDUCT:

(1) Attendance:

(a) 80% attendance in each course is compulsory. Any one failing to achieve this, shall not be allowed to appear in the University examination.
(b) A candidate pursuing MD/MS course shall reside in the campus and work in the respective department of the institution for the full period as a full time student. No candidate is permitted to run a clinic/work in clinic/laboratory/ nursing home while studying postgraduate course. No candidate shall join any other course of study or appear for any other examination conducted by this university or any other university in India or abroad during the period of registration. Each year shall be taken as a unit for the purpose of calculating attendance.
(c) Every candidate shall attend symposia, seminars, conferences, journal review meetings, grand rounds, CPC, CCR, case presentation, clinics and lectures during each year as prescribed by the department and not absent himself / herself from work without valid reasons. Candidates should not be absent continuously as the course is a full time one.

(2) Monitoring Progress of Studies- Work diary/Log Book:

(a) Every candidate shall maintain a work diary in which his/her participation in the entire training program conducted by the department such as reviews, seminars, etc. has to be chronologically entered.

(b) The work scrutinized and certified by the Head of the Department and Head of the Institution is to be presented in the University practical/clinical examination.

(3) Periodic tests:

There shall be periodic tests as prescribed by the Medical Council of India and/ or the Board of Management of the University, tests shall include written papers, practical/clinical and viva voce.

(4) Records:

Records and marks obtained in tests will be maintained by the Head of the Department and will be made available to the University when called for.

THESIS:

(1) Every candidate pursuing MD/MS degree course is required to carry out work on research project under the guidance of a recognized post graduate teacher. Then such a work shall be submitted in the form of a Thesis.
(2) The Thesis is aimed to train a postgraduate student in research methods & techniques.
(3) It includes identification of a problem, formulation of a hypothesis, designing of a study, getting acquainted with recent advances, review of literature, collection of data, critical analysis, comparison of results and drawing conclusions.
(4) Every candidate shall submit to the Registrar of the University in the prescribed format a Plan of Thesis containing particulars of proposed Thesis work within six months of the date of commencement of the course on or before the dates notified by the University.
(5) The Plan of Thesis shall be sent through proper channel.
(6) Thesis topic and plan shall be approved by the Institutional Ethics Committee before sending the same to the University for Registration.
(7) Synopsis will be reviewed and the Thesis topic will be registered by the University.
(8) No change in the thesis topic or guide shall be made without prior notice and permission from the University.
(9) The Guide, Head of the Department and head of the institution shall certify the thesis. Three printed copies and one soft copy of the thesis thus prepared shall be submitted by the candidate to the Principal. While retaining the soft copy in his office, the Principal shall send the three printed copies of the thesis to the Registrar six months before MD/MS University Examinations. Examiners appointed by the University shall evaluate the thesis. Approval of Thesis at least by two examiners is an essential pre-condition for a candidate to appear in the University Examination.
(10) Guide: The academic qualification and teaching experience required for recognition by this University as a guide for thesis work is as laid down by Medical Council of India/Mahatma Gandhi University of Medical Sciences & Technology, Jaipur.
(11) Co-guide: A co-guide may be included provided the work requires substantial contribution from a sister department or from another institution recognized for teaching/training by Mahatma Gandhi University of Medical Sciences & Technology, Jaipur/Medical Council of India. The co-guide shall be a recognized postgraduate teacher.
(12) Change of guide: In the event of a registered guide leaving the college for any reason or in the event of death of guide, guide may be changed with prior permission from the University.

ELIGIBILITY TO APPEAR FOR UNIVERSITY EXAMINATION:

The following requirements shall be fulfilled by every candidate to become eligible to appear for the final examination:

(1) Attendance: Every candidate shall have fulfilled the requirement of 80% attendance prescribed by the University during each academic year of the postgraduate course. (as per NMC rules)

(2) Progress and Conduct: Every candidate shall have participated in seminars, journal review meetings, symposia, conferences, case presentations, clinics and didactic lectures during each year as designed by the department.

(3) Work diary and Logbook: Every candidate shall maintain a work diary for recording his/her participation in the training program conducted in the department. The work diary and logbook shall be verified and certified by the Department Head and Head of the Institution.

(4) Every student would be required to present one poster presentation, to read one paper at a National/State Conference and to have one research paper which should be published/accepted for publication/ sent for publication to an indexed journal during the period of his/her post graduate studies so as to make him/her eligible to appear at the Post Graduate Degree Examination.

(5) Every student would be required to appear in and qualify the Pre-University Post graduate degree Mock examination. Post graduate students who fail to appear in or do not qualify the Pre-University Post graduate degree Mock examination shall not be permitted to appear in the final examination of the University.

The certification of satisfactory progress by the Head of the Department/ Institution shall be based on (1), (2), (3), (4) and (5) criteria mentioned above.

ASSESSMENT:

(1) The progress of work of the candidates shall be assessed periodically by the respective guides and report submitted to the Head of the Institution through the Head of the Department at the end of every six months. The assessment report may also be conveyed in writing to the candidate who may also be advised of his/her shortcomings, if any.

(2) In case the report indicate that a candidate is incapable of continuing to do the work of the desired standard and complete it within the prescribed period, the Head of the Institution may recommend cancellation of his/her registration at any time to the University.

(3) Formative Assessment:

(a) General Principles

i. The assessment is valid, objective, constructive and reliable.
ii. It covers cognitive, psychomotor and affective domains.
iii. Formative, continuing and summative (final) assessment is also conducted.
iv. Thesis is also assessed separately.

(b) Internal Assessment

i. The internal assessment is continuous as well as periodical. The former is based on the feedback from the senior residents and the consultants concerned. Assessment is held periodically.
ii. Internal assessment will not count towards pass/fail at the end of the program, but will provide feedback to the candidate.
iii. The performance of the Postgraduate student during the training period should be monitored throughout the course and duly recorded in the log books as evidence of

the ability and daily work of the student.

iv. Marks should be allotted out of 100 as under

1) Personal Attributes - 20 marks
   a. Behavior and Emotional Stability: Dependable, disciplined, dedicated, stable in emergency situations, shows positive approach.
   b. Motivation and Initiative: Takes on responsibility, innovative, enterprising, does not shirk duties or leave any work pending.
   c. Honesty and Integrity: Truthful, admits mistakes, does not cook up information, has ethical conduct, exhibits good moral values, loyal to the institution.

2) Clinical Work - 20 marks
   a Availability: Punctual, available continuously on duty, responds promptly on calls and takes proper permission for leave.
   b Diligence: Dedicated, hardworking, does not shirk duties, leaves no work pending, does not sit idle, competent in clinical case work up and management.
   c Academic Ability: Intelligent, shows sound knowledge and skills, participates adequately in academic activities and performs well in oral presentation and departmental tests.
   d Clinical Performance: Proficient in clinical presentations and case discussion during rounds and OPD work up. Preparing Documents of the case history/examination and progress notes in the file (daily notes, round discussion, investigations and management) Skill of performing bed side procedures and handling emergencies.

3) Academic Activities - 20 marks
   a. Performance during presentation at Journal club/ Seminar/Case discussion/Stat meeting and other academic sessions. Proficiency in skills as mentioned in job responsibilities.

4) End of term theory examination - 20 marks
   a. End of term theory examination conducted at end of 1st, 2nd year and after 2 years 9 months.

5) End of term practical examination - 20 marks
   a. End of term practical/oral examinations after 2 years 9 months.
   b. Marks for personal attributes and clinical work should be given annually by all the consultants under whom the resident was posted during the year. Average of the three years should be put as the final marks out of 20.
   c. Marks for academic activity should be given by the all consultants who have attended the session presented by the resident.
   d. The Internal assessment should be presented to the Board of examiners for due consideration at the time of Final Examinations.
   e. Yearly (end of 1st, 2nd & 3rd year) theory and practical examination will be conducted by internal examiners and each candidate will enter details of theory paper, cases allotted (2 long & 2 short) and viva.
   f. Log book to be brought at the time of final practical examination.

APPOINTMENT OF EXAMINERS:

Appointment of paper setters, thesis evaluators, answer books evaluators and practical & viva voce examiners shall be made as per regulations of the Medical Council of India.

SCHEME OF EXAMINATION:

Scheme of examination in respect of all the subjects of MD/MS shall be as under:

(1) The examination for MD/MS shall be held at the end of three Academic Years.

(2) Examinations shall be organized on the basis of marking system.

(3) The period of training for obtaining MD/MS degrees shall be three completed years including the period of examination.

(4) The University shall conduct not more than two examinations in a year for any subject with an interval of not less than 4 months and not more than 6 months between the two examinations.

(5) The examinations shall consist of:

(a) Thesis:

i. Thesis shall be submitted at least six months before the main Theory examinations.

ii. The thesis shall be examined by a minimum of three examiners – one Internal and two External examiners who shall not be the examiners for Theory and Clinical/Practical.

iii. In departments where besides the two earmarked practical/clinical examiners no one else is a qualified P.G. teacher, in that case the Thesis shall be sent to the third external examiner who shall actually be in place of the internal examiner.

iv. Only on the acceptance of the thesis by any two examiners, the candidate shall be eligible to appear for the final examination.

v. A candidate whose thesis has been once approved by the examiners will not be required to submit the Thesis afresh, even if he/she fails in theory and/or practical of the examination of the same branch.

vi. In case the Thesis submitted by a candidate is rejected, he/she should be required to submit a fresh Thesis.

(b) Theory papers:

i. There shall be four theory papers.

ii. Out of these, one shall be of Basic Medical Sciences and one shall be of Recent Advances.

iii. Each theory paper examination shall be of three hours duration.

iv. Each theory paper shall carry maximum 100 marks.

v. The question papers shall be set by the External Examiners.

vi. There will be a set pattern of question papers.

Every question paper shall contain three questions. All the questions shall be compulsory, having no choice.

Question No. 1 shall be of long answer type carrying 20 marks.

Question No. 2 shall have two parts of 15 marks each. Each part will be required to be answered in detail.

Question No. 3 shall be of five short notes carrying 10 marks each.

vii. The answer books of theory paper examination shall be evaluated by two External and two internal examiners. Out of the four paper setters, the two paper setters will be given answer books pertaining to their papers and the answer books of the remaining two papers will be evaluated by two Internal Examiners. It will be decided by the

President as to which paper is to be assigned to which Internal Examiner for evaluation.

viii. A candidate will be required to pass theory and practical examinations separately in terms of the governing provisions pertaining to the scheme of examination in the post graduate regulations. The examinee should obtain minimum 40% marks in each theory paper and not less than 50% marks cumulatively in all the four papers for degree examination to be cleared as "passed" at the said Degree examination.

(c) Clinical/ Practical & Oral examinations:

i. Clinical/Practical and Oral Examination of 400 marks will be conducted by at least four examiners, out of which two (50%) shall be External Examiners.

ii. A candidate will be required to secure at least 50% (viz. 200/400) marks in the Practical including clinical and viva voce examinations.

(6) If a candidate fails in one or more theory paper(s) or practical, he/she shall have to reappear in the whole examination i.e. in all theory papers as well as practical.

GRACE MARKS

No grace marks will be provided in MD/MS examinations.

REVALUATION / SCRUTINY:

No Revaluation shall be permitted in the MD/MS examinations. However, the student can apply for scrutiny of the answer books as per University Rules.

GUIDELINES FOR COMPETENCY BASED POSTGRADUATE TRAINING PROGRAMME FOR MD IN PALLIATIVE MEDICINE

Preamble

Palliative Medicine is a broad medical specialty that involves study and management of patients with active, progressive, far advanced disease, for whom the prognosis is limited and the goals and focus of care is relief of symptoms and quality of life.

The Indian Association of Palliative care (IAPC) definition of Palliative Care (Medicine) states that "Palliative Care is the active total care applicable from the time of diagnosis, aimed at improving the quality of life of patients and their families facing serious life-limiting illness, through the prevention and relief of suffering from pain and other physical symptoms as well as psychological, social and spiritual distress through socially acceptable and affordable interventions".

The key features of Palliative Medicine are, recognition and relief of pain and other symptoms, recognition and relief of psychosocial suffering, including care and support for families and caregivers, recognition and relief of spiritual / existential suffering, recognition of End of Life Care needs and provision of End of Life Care and Bereavement Support after death. Palliative Medicine is applicable to all life limiting conditions such as cancer, advanced HIV/AIDS, end stage organ failure, chronic neurodegenerative conditions etc. Palliative Medicine should be applied early and should be integrated with all health services.

Specialist Training in Palliative Medicine involves 24 months broad experience (Core Training) in Palliative medicine and 12 months focused experience (Non - Core Training) in cancer medicine, general medicine and related subspecialty and others. The goal of this training program is to provide competency-based training in symptom management, supportive care, awareness of a range of medical and non-medical options available for the disease management of palliative care patients, psychosocial support to patients and families, working in a multi-disciplinary/inter-disciplinary team, working in different clinical settings, communication skills, decision making skills, procedural skills relevant to Palliative Medicine, ethics based good practice, leadership, teaching and research.

At the completion of the Specialist Training Program in Palliative Medicine, as defined by the curriculum, it is expected that the postgraduate trainee will have acquired knowledge, attitude and clinical skills required for competent palliative medicine practice.

SUBJECT SPECIFIC OBJECTIVES

The trainee at the end of training would have acquired the ability to:

1. Manage pain and other physical symptoms, using appropriate clinical assessment methods, rational investigations and provide relief of pain and symptoms by pharmacological and non-pharmacological methods.
2. Explain role of psychological, emotional, social, spiritual and existential issues in illness, suffering and symptom manifestations, taking into account the socio-cultural context of the patient and families.
3. Manage the issues in illness, suffering and symptom manifestations clinically using appropriate assessment methods and manage these issues by self, help of multi- disciplinary team and by referring to relevant specialists.
4. Provide good supportive care in patients with advanced life limiting illness and able to manage concurrent illness, complications, co-morbid illness and emergencies.
5. Provide specialist palliative care in all clinical settings i.e. outpatients, ward, home, hospice and as consultation liaison.
6. Recognize the terminal phase, recognize the dying process and end of life needs, participate in effective end of life decision making with colleagues/peers, communicate effectively with the family, plan and provide good end of life care.
7. Communicate with the family in a sensitive and emphatic manner, able to communicate bad news, able to deal with difficult and advanced communication situations.
8. Communicate effectively with the peers, supervisors and other members of the team.
9. Mentor and supervise junior doctors, maintain active interest in academics and exhibit high level of teaching.
10. Undertake research in palliative care, conduct observation studies, RCT and clinical audits.
11. Incorporate Evidence Based medicine (EBM) and Good Clinical practices and apply them for patient care and teaching.
12. Manage human resource, financial, quality assurance, data management, and administrative aspects of his/her own practice or palliative care service.
13. Develop life-long learning skills to update the knowledge and skills of advanced palliative care.
14. Recognize stress & burn out and institute mitigation measures wit recognition of need for self care.

SUBJECT SPECIFIC COMPETENCIES

By the end of the course, the student should have acquired knowledge (cognitive domain), professionalism (affective domain) and skills (psychomotor domain) as per details given below:

A. Cognitive domain

The post graduate student should acquire knowledge in the following areas by the end of the training programme.

1. Relevance of topic and relevant literature review
2. Prepared and up to date with the topic
3. Clarity, content and presentation style
4. Engaging audience and answering questions
5. Effectiveness and feedback evaluation
6. Understanding of evidence based medicine
7. Understanding of types of research – Qualitative/Quantitative
8. Study design and statistical application
9. Good clinical practice in research
10. Critical appraisal of scientific literature and scientific medical writing

B. Affective domain

1. Work in a multidisciplinary/interdisciplinary team as a team member
2. Recognize contributions of other team members and involve them in care provision and co-ordination of care
3. Empower patients and their families facing life limiting/terminal illness
4. Recognize stress and burn and institutes mitigation measures and recognizes need for self care
5. Supervision, monitoring and leadership skills.

C. Psychomotor domain

1. Comprehensive assessment and management of pain and physical symptoms.
2. Comprehensive assessment and management of psychological, spiritual, and social issues.
3. Communication skills in patients with advanced life limiting illness setting
4. Disease management options available to patients with advanced life limiting illness in oncology and non oncology
5. Identification of supportive care needs and understand
6. Manage concurrent illness, co morbid conditions and complications
7. Provide comprehensive end of life care management.
8. Expert Clinical Decision making skills with full understanding of the socio- cultural context of patients and families, their value system and beliefs
9. Ethics based decision making and good clinical practice
10. Provide specialist palliative care across all age groups and clinical setting.

SYLLABUS

This Syllabus outlines the broad concepts, learning objectives, theoretical knowledge (Cognitive Domain), attitudes and behavior (Affective Domain), and clinical skills (Psychomotor Domain) required to become a specialist Palliative Medicine Physician. At the completion of the Post Graduate Training Program, trainees should be competent to provide at consultant level, unsupervised comprehensive medical care in Palliative Medicine. Attaining competency in all aspects of this curriculum is expected to take three years of supervised training. It is expected that teaching, learning and assessment associated with the Palliative Medicine Specialist Training Syllabus will be undertaken within the three years of training.

A. Cognitive domain (knowledge domain)

The postgraduate trainee pursuing MD (Palliative Medicine) course is expected to have in-depth knowledge of following subject topics. [CD=Cognitive Domain]

SECTION CD1: INTRODUCTION TO PALLIATIVE MEDICINE		
Sl. No	**Topic**	**Essentials**
CD1.1 HISTORY OF PALLIATIVE MEDICINE		
1.1.1	History of Palliative Medicine	▪ Ancient history of hospice care ▪ Dame Dr. Cicely Saunders and St. Christopher's Hospice ▪ History and philosophy of Hospice movement ▪ Modern Hospice movement and evolution of palliative care ▪ Evolution of Palliative Medicine ▪ History of Indian Palliative Care movement
CD1.2 PRINCIPLES OF PALLIATIVE MEDICINE		
1.2.1	Principles of Palliative Medicine 1	▪ Definitions (Palliative Care, Palliative Approach, Palliative Procedure, Generalist and Specialist Palliative Care) ▪ Illness trajectories and stages ▪ Estimating the Palliative Care need ▪ Cardinal concepts underlying the philosophy of palliative medicine ▪ WHO Principles of Palliative Care ▪ Holistic Care
1.2.2	Principles of Palliative Medicine 2	▪ Principle 1: Unit of care includes patient and his/her family ▪ Principle 2: Symptoms must be routinely assessed and managed ▪ Principle 3: Decisions Regarding Medical Treatments Must Be Made in an Ethical Manner ▪ Principle 4: Palliative Care Is Provided

		through an Interdisciplinary Team ▪ Principle 5: Palliative Care Coordinates and Provides for Continuity of Care ▪ Principle 6: Dying Is a Normal Part of Life, and Quality of Life Is a Central Clinical Goal ▪ Principle 7: Palliative Care Attends to Spiritual Aspects of Patient and Family Distress and Well-being ▪ Principle 8: Palliative Care neither Hastens Death nor Prolongs Dying ▪ Principle 9: Palliative Care Extends Bereavement Support to Patients' Families ▪ Principle 10: Palliative Care Preserves and Enhances the Well-being of Clinical and Support Staff and Volunteers ▪ Principle 11: Palliative Care Engages in Continuous Quality Improvement and Research Efforts ▪ Principle 12: Palliative Care Advocates for Patients and Families and Advances Public Policy to Improve Access to Needed Services and Quality of Care
CD1.3 SPECIALITY OF PALLIATIVE MEDICINE		
1.3.1	Specialty of Palliative Medicine	▪ Levels of Care (Level 1-3) ▪ Development of Palliative Medicine Specialty ▪ Core competencies of a Palliative Medicine Physician ▪ Specialist Palliative Medicine Service ▪ CanMEDS Physician Competency Framework ▪ How to avoid downsides involved in specialist training
CD1.4 MULTIDISCIPLINARY TEAM		
1.4.1	Multidisciplinary team 1	▪ Concept of Shared Care ▪ Multidisciplinary and Interdisciplinary team ▪ Role of a nurse in palliative care ▪ Role of a medical social worker in palliative care ▪ Role of occupational and physiotherapist in palliative care ▪ Role of Clinical Psychologist/Counselor in palliative care ▪ Role of nutritionist in palliative care
1.4.2	Multidisciplinary team 2	▪ Role of wound and stoma therapist in palliative care ▪ Role of speech and language specialist

		▪ Role of volunteer in palliative care ▪ Role of chaplain and spiritual care person in palliative care ▪ Role of clinical pharmacist in palliative care ▪ Role of music therapist/art therapist/play therapist ▪ Role of yoga and complimentary and alternative medicine specialist
CD1.5 MODELS OF PALLIATIVE CARE DELIVERY		
1.5.1	Models of Palliative Care Delivery 1	▪ Stjernswärd's Palliative Care for all Model ▪ Early Palliative Care ▪ Acute Palliative Care ▪ Integrated model ▪ Simultaneous and shared care model (Description of model, mode of service delivery, advantages and disadvantages, evidence in literature)
1.5.2	Models of Palliative Care Delivery 2	▪ In-patient palliative care unit ▪ Hospice (Free standing unit) ▪ Hospital palliative care team (consultation liaison service) ▪ Community palliative care service (Home based palliative care) ▪ Out-patient palliative care unit ▪ Day palliative care unit (Team composition, scope of service, skills, staffing, infrastructure, benefits and disadvantages)
CD1.6 RESEARCH IN PALLIATIVE MEDICINE		
1.6.1	Research in Palliative Medicine 1	▪ Scope of research in Palliative Medicine ▪ Ethics of research in Palliative Medicine ▪ Barriers for research in Palliative Medicine ▪ Evidence based Palliative Medicine (Oxford CEBM levels of evidence, Obtaining evidence, Developing a citation database for review, Judging the quality of trials, Judging the quality of review, Critical evaluation of a RCT and systematic review) ▪ Conducting a clinical trial in Palliative Medicine

1.6.2	Research in Palliative Medicine 2	▪ Writing a research protocol in Palliative Medicine (Identifying the research area, defining the clinical problem, literature review, formulating the research question, defining objectives and patient population, appropriate study design, methodology, outcomes to be measured, statistical consideration, interpretation of results and arriving at conclusion) ▪ Qualitative research in Palliative Medicine ▪ Psycho-social research in Palliative Medicine
CD1. scales and tools		
1.7.1	Scales and tools 1	▪ Broad multi-symptom assessment scales and tools ▪ Performance status scales and tools ▪ Pain assessment scales and tools ▪ scales and tools used to measure dyspnea ▪ scales and tools used to measure fatigue ▪ scales and tools measuring delirium ▪ scales and tools used for assessment of anxiety ▪ scales and tools used for measuring depression
1.7.2	scales and tools 2	▪ scales and tools measuring distress ▪ scales and tools measuring spiritual and existential distress ▪ scales and tools measuring coping and adaptation ▪ Scales and tools measuring social issues ▪ Scales and tools measuring care-giving issues ▪ Scales and tools measuring family issues ▪ Scales and tools measuring communication and satisfaction with care ▪ Scales and tools measuring sexuality and intimacy ▪ Scales and tools measuring pediatric aspects of advanced illness
CD1.8 ADVOCACY IN PALLIATIVE MEDICINE		
1.8.1	Advocacy	▪ Policy Advocacy (Advocating for institutional, state/national palliative care policy) ▪ Capacity Building Advocacy (Advocacy for resources/funds to develop infrastructure needed for palliative care provision) ▪ Drug Availability Advocacy (Advocacy for

		improving access to pain and symptom control drugs – Essential Medication List) ▪ Education Related Advocacy
CD1.9 HEALTH POLICY AND PROGRAMS IN PALLIATIVE MEDICINE		
1.9.1	Policy, Programs and Regulations	▪ Maharashtra and Kerala State Palliative Care Policy ▪ WHO Palliative Care Collaborating Centers and their activities ▪ Network neighborhood in Palliative Care ▪ National Palliative Care strategy for India ▪ Narcotic drugs and psychotropic substance (NDPS) act and its amendments
CD1.10 QUALITY AND STANDARDS IN PALLIATIVE MEDICINE		
1.10.1	Quality and Standards	▪ Quality and Standards in Palliative Medicine ▪ Classification and Types of Standards ▪ Country specific International Standards for Palliative Care ▪ End of Life Care Standards ▪ The Gold Standards Framework ▪ Clinical Practice Guidelines as applicable to Palliative Care
SECTION CD2: PALLIATIVE PHARMACOLOGY		
Sl. No	**Topic**	**Essentials**
CD2.1 PAIN PHARMACOLOGY		
2.1.1	Non-steroidal anti-inflammatory drugs	▪ Cyclooxygenase (COX) pathway ▪ Classification (Classification based on COX, Efficacy, Potency) ▪ Pharmacokinetics ▪ Type A and Type B reactions ▪ NSAIDS and organ system (Renal, Hepatic, Cardiovascular, Gastrointestinal, Lung, Platelets, Bone, Genitourinary) ▪ Individual pharmacology of commonly used NSAIDs (Aspirin, Diclofenac, Paracetamol, Ibuprofen, Ketorolac, Oxicams, Etorocoxib) ▪ Rational NSAID prescription ▪ Safe NSAID prescription
2.1.2	Opioids 1	▪ Opioids definitions ▪ Opioid receptors ▪ Opioid classification (Chemical and Receptor based classification) ▪ Opioid metabolism and metabolites ▪ Pharmacokinetics ▪ Opioid use in renal and hepatic impairment

		▪ Common adverse effects of opioids and its ▪ management ▪ Systemic effects of long term opioid use ▪ Opioids induced respiratory depression ▪ Opioids induced hyperalgesia
2.1.3	Opioids 2	▪ Opioid potency and conversion tablesOpioid rotation ▪ Individual pharmacology of weak opioids (Codeine, Tramadol, Tapentadol, Dextropropoxyphene) ▪ Individual pharmacology of strong opioids (Morphine, Fentanyl, Buprenorphine, Oxycodone, Hydromorphone) ▪ Initiating a patient on strong opioids and titration of dose ▪ Using strong opioids - Instructions to patients and caregivers
2.1.4	Adjuvant Analgesics 1 (Adjuvants used in neuropathic pain)	▪ Anti-depressants (TCAs and SSRIs) ▪ Anti-epileptics ▪ Anti-arrhythmic (Na Channel Blockers) ▪ NMDA Receptor antagonists ▪ K Channel openers ▪ Drugs causing activation of GABA inhibitory and Glutamate excitatory system ▪ Corticosteroids ▪ Neuropathic Pain Step Ladder
2.1.5	Adjuvant Analgesics 2	▪ Adjuvant analgesics used in bone pain (Dexamethasone, Calcitonin, Bisphosphonates) ▪ Adjuvant analgesics used in GI pain (Hyoscine, Dicyclomine, Octreotide) ▪ Adjuvant analgesics used in genitourinary pain (Oxybutynin, Tolterodine, Solifenacin, Phenazopyridine, Propantheline, Tamsulosin, Flavoxate) ▪ Adjuvants in myofacial pain and muscle spasms (Baclofen, Flupirtine, Eperisone, Tolperisone, Thiocolchicoside)
CD 2.2 PHARMACOLOGICAL MANAGEMENT OF NAUSEA, VOMITING, CONSTIPATION		
2.2.1	Nausea and Vomiting 1	▪ Physiology of nausea and vomiting ▪ Emesis pathway ▪ Physiology of vomiting centers ▪ Receptors and neurotransmitters involved in Nausea and Vomiting ▪ Classification of anti-emetics (Central and GIT)

		▪ Receptor sites and affinities of anti-emetics ▪ Classification of prokinetics based on receptor action ▪ Pharmacological management of chemotherapy and radiotherapy induced nausea and vomiting.
2.2.2	Nausea and Vomiting 2	▪ Detailed pharmacology of individual drugs used in nausea and vomiting (Metoclopramide, Domperidone, 5HT3 antagonists) ▪ Anti-histaminic Anti-muscarinic drugs in nausea and vomiting ▪ Psychotropic drugs in nausea and vomiting ▪ Miscellaneous drugs in nausea and vomiting (Corticosteroids, Benzodiazepines, Cannabinoids, NK receptor antagonists)
2.2.3	Constipation	▪ Classification of aperients (Laxatives) ▪ Detailed pharmacology of commonly used drugs (Docusate, Bisacodyl, Lactulose, Macrogol, Senna, Magnesium compounds, Methyl Naltrexone) ▪ Rectal products (Suppositories, Micro and Standard Enema) ▪ Pharmacological management of opioid induced constipation, ▪ Pharmacological management of constipation in paraplegia/quadriplegia, ▪ Common drugs used in diarrhea.
CD2.3 CARDIOVASCULAR, RESPIRATORY AND CNS DRUGS IN PALLIATIVE CARE		
2.3.1	Cardiovascular	▪ Diuretics ▪ Optimizing and stopping cardiovascular drugs in palliative phase of illness trajectory ▪ Pharmacological management of cancer thrombosis, deep venous thrombosis and pulmonary embolism
2.3.2	Respiratory	▪ Oxygen and intermittent/long term oxygen therapy in palliative care ▪ Bronchodilators (oral/parenteral/inhaled) ▪ Drugs used in management of dyspnea ▪ Drugs used in management of cough ▪ Drugs used in management of respiratory secretions
2.3.3	CNS (Anxiolytics, Anti-depressants and Anti- psychotics)	▪ Benzodiazepines in palliative care practice (classification, pharmacology of individual drugs, rational usage) ▪ Prescribing anti-depressants in palliative care practice (commonly used drugs and their pharmacology)

		▪ Drugs used in delirium (typical and atypical anti psychotics) ▪ Drugs used in managing terminal restlessness (step ladder and pharmacology of drugs used in terminal sedation)
CD2.4 TOPICAL AGENTS USED IN PALLIATIVE MEDICINE		
2.4.1	Topical Agents	▪ Topical agents used for dry mouth, excessive salivation, mucositis, apthous ulcers, oral candida ▪ Topical agents for managing dry skin, pruritus, pressure sores, non healing/foul smelling/bleeding wounds ▪ Topical anal preparations ▪ Topical eye preparations
CD2.5 DRUG INTERACTIONS IN PALLIATIVE MEDICINE		
2.5.1	Drug Interactions	▪ Serotonin syndrome ▪ QT prolongation ▪ Drug induced movement disorders ▪ Synergistic sedation ▪ Metabolic interactions (Cytochrome P450) ▪ Pharmacokinetic interactions
CD2.6 PARENTERAL ANALGESIC PREPARATIONS		
2.6.1	Parenteral analgesic infusions	▪ Preparing analgesic infusions (non opioids, weak opioids, strong opioids) ▪ Syringe driver preparations ▪ Syringe driver compatibility and interactions ▪ Managing a patient on syringe driver ▪ Drugs used in epidural and intrathecal analgesia
CD2.7 PRESCRIBING PALLIATIVE DRUGS IN SPECIAL SITUATIONS		
2.7.1	Palliative drugs in special situations	▪ Palliative drugs in renal dysfunction ▪ Palliative drugs in hepatic dysfunction ▪ Palliative drugs in a patient with cardiovascular morbidity ▪ Palliative drugs in children ▪ Palliative drugs in elderly ▪ Palliative drugs in cognitive impairment
SECTION CD3: SYMPTOM CONTROL IN PALLIATIVE MEDICINE		
Sl. No	**Topic**	**Essentials**
CD3.1 PAIN		
3.1.1	Introduction to Pain	▪ Pain definition(s). ▪ Pain taxonomy. ▪ Pain classification(s). ▪ Acute/chronic/cancer pain-approach and differences ▪ Breakthrough pain ▪ Pain Crisis

		▪ Emory pain estimate model. ▪ General principles involved in managing a patient with pain in a palliative care setting.
3.1.2	Mechanism of Pain 1	▪ Anatomy of pain pathway. ▪ Peripheral and spinal pain mechanisms: Nociception and anti-nociception. ▪ Nociceptors ▪ Transductionof nociceptive pain. ▪ Transmission of nociceptive pain. ▪ Modulation of nociceptive pain. ▪ Perception of nociceptive pain.
3.1.3	Mechanism of Pain 2	▪ Nerve injury ▪ Peripheral and central sensitization ▪ Modulation in neuropathic pain. ▪ Pathophysiological basis of hyperalgesia/allodynia. ▪ Structural anatomy of bone in relation to malignant bone pain. ▪ Pathophysiological mechanisms involved in malignant bone pain.
3.1.4	Assessment of Pain	▪ Medical evaluation of a patient with pain. ▪ Measurement of pain and pain assessment tools – both nociceptive and neuropathic. Role of investigations/imaging in pain patients. ▪ Total pain psychological/psychosocial evaluation in pain. ▪ Evaluation of pain associated impact and disability.
3.1.5	Cancer Pain Syndromes	▪ Cancer related acute pain situations (Diagnostic/Therapeutic interventions, anti-cancer therapy, complications) ▪ Cancer related chronic pain situations (Direct tumor related, anti-cancer therapy, complications, Paraneoplastic)
3.1.6	Cancer Associated Nociceptive Pain	▪ Visceral pain syndromes ▪ Genitourinary pain syndromes ▪ Vascular pain syndromes ▪ Cancer related headache and facial pain, ▪ Paraneoplastic nociceptive pain syndromes ▪ Lymphedema associated pain ▪ Inflammation/infection associated pain
3.1.7	Malignant Bone Pain	▪ Bone pain syndromes ▪ Pain in vertebral and long bone metastasis ▪ Mirel's scoring system ▪ Imaging modalities in bone pain, ▪ Management of bone pain (Analgesic step ladder,

		Bisphosphonates, Calcitonin, Radiotherapy, Radioisotopes, closed and open surgical interventions, chemo/hormonal and targeted therapy)
3.1.8	Cancer Associated Neuropathic Pain	▪ Direct nerve injury (all plexopathies, painful mononeuropathy ▪ Paraneoplastic sensory neuropathy ▪ Malignant painful radiculopathy ▪ Painful cranial neuralgias), ▪ Cancer treatment associated nerve toxicity (chemotherapy/RT associated neuropathy) ▪ Surgical neuropathies (Phantom limb, post mastectomy/post thoracotomy syndromes) ▪ Current guidelines for neuropathic pain management.
CD3.2 GASTROINTESTINAL SYMPTOMS		
3.2.1	Nausea and Vomiting	▪ Definitions and Epidemiology ▪ Etiological classification of Nausea and Vomiting in Palliative Care ▪ Approach to a patient with Nausea and Vomiting ▪ Opioid induced Nausea and Vomiting ▪ Chemotherapy induced Nausea and Vomiting ▪ Radiotherapy induced Nausea and Vomiting ▪ Etiology specific rational management of nausea and vomiting.
3.2.2	Constipation and Diarrhea	▪ Comprehensive Definition/Classification ▪ Etiology of constipation in a palliative care setting ▪ Clinical approach and rectal examination ▪ Constipation assessment scales ▪ Principles of managing constipation and pharmacological approach ▪ Opioid induced constipation ▪ Managing constipation in a patient with paraplegia ▪ Assessment and management of diarrhea in palliative care practice
CD3.3 RESPIRATORY SYMPTOMS		
3.3.1	Dyspnea	▪ Prevalence of dyspnea in life limiting conditions ▪ Pathophysiology of dyspnea ▪ Physiological classification of dyspnea in PC ▪ Assessment of dyspnea (Quality, Intensity, Impact, Distress) ▪ Four quadrant approach in management of dyspnea (Medical, Rehab, Palliative and End of

		Life Model) ▪ Palliative Pharmacology of Dyspnea ▪ Morphine in Dyspnea ▪ Oxygen in Dyspnea ▪ Non Pharmacological management of dyspnea ▪ Palliative Sedation in Intractable Dyspnea
3.3.2	Cough, Hemoptysis Respiratory Secretions, Bronchorrhea	▪ Cough (Pathway, Causes of cough in PC setting, Non-pharmacological management, Pharmacological treatment, Management of Refractory Cough) ▪ Hemoptysis (Classification – Minimal, Active, Massive, Pseudo) ▪ Hemoptysis (Causes in PC setting, Assessment, Non Pharmacological management, Pharmacological treatment, Interventions) ▪ Palliation of Massive Hemoptysis. ▪ Respiratory secretions (Prevalence, Classification, Presentation, Non Pharmacological management, Pharmacological treatment). ▪ Bronchorrhea (Prevalence, Clinical features, Management)
CD3.4 CNS SYMPTOMS		
3.4.1	Delirium	▪ Understanding consciousness (Awakeness, Awareness and Alertness) ▪ Neurophysiology of Delirium ▪ Epidemiology and risk factors ▪ Clinical features ▪ Tools used in Delirium Assessment ▪ Bedside assessment of Delirium ▪ Delirium types (Hypoactive/Hyperactive/Mixe) ▪ Differential Diagnosis ▪ Management of Delirium (Risk assessment, Prevention, Education, Safety, Non Pharmacological treatment, Pharmacological treatment) ▪ Terminal Delirium
CD3.5 MISCELLANEOUS SYMPTOMS		
3.5.1	Miscellaneous symptoms 1 (Hiccoughs, Pruritus, Sweats, Dysphagia)	▪ Hiccoughs (Definition, Classification, Hiccoughs pathway, Etiology in palliative care setting, Non pharmacological and pharmacological management, treatment of refractory hiccoughs) ▪ Pruritus – (Classification based on duration, Etiology, clinical presentation) (Pruritus pathway, chemical mediators, causes and

		mechanism) (Overall management and classification of drugs used in pruritus) (Pharmacological and non pharmacological management each type) ▪ Sweats (Etiology, Assessment and Management)
3.5.2	Miscellaneous symptoms 2 (Fatigue and Edema)	▪ Etiology of fatigue in a PC setting ▪ Pathophysiological mechanisms of fatigue ▪ Clinical Assessment and Tools used in Fatigue Assessment ▪ Non pharmacological and pharmacological management of fatigue ▪ Edema in PC setting ▪ Assessment and Management of Edema (excluding Lymphedema)
SECTION CD4: PALLIATIVE MEDICINE IN AN ONCOLOGY SETTING		
Sl. No	**Topic**	**Essentials**
CD4.1 BASICS OF ONCOLOGY		
4.1.1	Cancer Epidemiology	▪ Cancer trends in India (Incidence and Mortality) ▪ Cancer etiology, risk factors and risk assessment (Tobacco, Infections, Diet, Life style, Physical and Chemical factors) ▪ Hereditary and Familial Cancer Syndromes
4.1.2	Cancer Biology and Natural History of Cancer	▪ Cancer Hallmarks (Tumor Biology, Cell cycle, Apoptosis, Cancer Stem cells, Proto- oncogenes, Tumor suppressor genes, Angiogenesis, Invasion and Metastasis) ▪ Cancer Genetics
4.1.3	Principles of Anticancer Therapy	▪ Classification, pharmacokinetics and pharmacodynamics of anticancer drugs ▪ Indications, dose/dose schedules, toxicity of commonly used anti-cancer drugs ▪ Principles, uses and pharmacology of drugs used in hormone therapy
4.1.4	Palliative Surgery	▪ Principles of palliative surgery in oncology setting ▪ Indications, morbidities of palliative surgery in individual cancer ▪ Common palliative surgery procedures (Colostomy, Ileostomy, Gastrostomy, Urinary diversion procedures, Tracheostomy, Stenting, ERCP/PTBD and other interventional surgical/radiological procedures) ▪ Orthopedic surgeries in palliative care.

4.1.5	Palliative Chemotheray	▪ Principles of Cancer Chemotherapy and Palliative Chemotherapy ▪ Definition, Principles of Adjuvant and Neoadjuvant chemotherapy. ▪ Indications, principles and use of metronomic chemotherapy.
4.1.6	Palliative Radiotherapy	▪ Principles of Palliative Radiotherapy ▪ Role of RT in brain and malignant spinal cord compression ▪ Role of RT in skeletal metastasis ▪ Role of RT in visceral and soft tissue metastasis Role of RT in Hemostasis, Analgesia and management of Obstructive symptoms
CD4.2 PALLIATIVE MANAGEMENT OF COMMON CANCERS		
4.2.1	Head and Neck, Brain and Thoracic cancers	▪ Stage-wise management of head and neck cancers ▪ Palliative RT and metronomic chemotherapy in Palliative/Advanced Head and Neck Cancers ▪ Management of low grade and high grade brain tumors ▪ Role of Palliative RT in patients with GBM with low KPS/Management of brain stem gliomas and recurrent brain tumors ▪ Palliative management of advanced esophageal cancers and palliative treatment of dysphagia ▪ Palliative management of advanced lung cancers
4.2.2	Breast and Genito- urinary cancers	▪ Stage-wise management of breast cancer ▪ Palliative management of advanced breast cancer ▪ Treatment algorithm of common genito-urinary cancers ▪ Palliative RT for advanced genito-urinary cancers ▪ Palliative chemotherapy for advanced genito-urinary cancers ▪ Palliation of obstructive Uropathy
4.2.3	GIT Cancers including Hepatobiliary	▪ Stage-wise management of GIT/Hepatobiliary cancers ▪ Palliative RT indications and schedules in advanced GI cancer ▪ Palliative chemotherapy for advanced GI/Hepatobiliary cancers ▪ Palliation of bleeding, obstructive jaundice, malignantascites

4.2.4	Pediatric cancers, soft tissue tumors, leukemia and lymphoma	▪ Treatment algorithms for common pediatric cancers ▪ Palliative chemotherapy regimens for advanced/relapse and recurrent pediatric solid tumors, lymphomas and leukemia ▪ Palliative RT indications and schedules In pediatric solid tumors and lymphomas
CD4.3 CANCER COMPLICATIONS AND ONCOLOGICAL EMERGENCIES		
4.3.1	Neurological Complications and Emergencies 1	Malignant Spinal Cord Compression ▪ Anatomy of Spinal Cord ▪ Epidemiology, Types, Frequency ▪ Clinical presentation ▪ Investigations ▪ Conservative Management ▪ RT/Surgery and other interventions ▪ Prognostication ▪ Evidence base for each intervention
4.3.2	Neurological Complications and Emergencies 2	▪ Status Epilepticus ▪ Brain Metastasis ▪ Raised Intracranial Pressure (Cerebral Edema) ▪ Encephalopathy (Structural, Metabolic, Septic)
4.3.3	Hematological and Vascular Complications and Emergencies	▪ Malignant SVC Obstruction ▪ Deep venous thrombosis and Pulmonary Embolism ▪ Hemorrhage ▪ Tumor Lysis Syndrome ▪ Neutropenic sepsis
4.3.4	Gastrointestinal, Thoracic, Genitourinary, Bone and other Complications and Emergencies 1	Malignant Bowel Obstruction (MBO) ▪ Physiologic reactions to Malignant Bowel Obstruction ▪ Etiological of bowel obstruction in a patient with advanced cancer ▪ Approach to a patient with bowel obstruction ▪ Proximal versus Distal Bowel obstruction ▪ Rationally investigating a patient with MBO ▪ When to consider conservative management in MBO ▪ Principles and steps involved in conservative management of MBO ▪ Pharmacology of drugs used in MBO ▪ Interventional techniques in MBO ▪ Nutrition in MBO ▪ Prognostication in MBO

4.3.5	Gastrointestinal, Thoracic, Genitourinary, Bone and other Complications and Emergencies 2	▪ Malignant Ascites ▪ Malignant Pleural and Pericardial Effusion ▪ Obstructive Uropathy ▪ Pathological fractures ▪ Airway obstruction and Stridor ▪ Managing Pain Crisis ▪ Managing Opioid Overdose
SECTION CD5: PALLIATIVE MEDICINE IN A NON ONCOLOGY SETTING		
Sl. No	**Topic**	**Essentials**
CD5.1 END STAGE ORGAN FAILURE		
5.1.1	End stage Chronic Lung Disease (CLD)	▪ Defining End Stage COPD ▪ Symptomatology of end stage COPD, ▪ Initiation of palliative medicine in end stage COPD (Gold Standards Framework) ▪ 4 quadrant approach (Medical, Rehab, Palliative and EOLC) ▪ Dyspnea management stepladder ▪ Medical and Rehab models ▪ Palliative Model (Pharmacological/Non pharmacological) ▪ Opioids in Dyspnea (Mechanism/dose/evidence) ▪ Guidelines for initiating EOLC model in end stage COPD ▪ EOLC in end stage COPD ▪ Palliative Sedation in refractory dyspnea.
5.1.2	End stage Congestive Heart Failure (CHF)	▪ Defining end stage cardiac failure ▪ Illness trajectory and various trajectory models ▪ Heart failure stages as relevant to palliative care ▪ Symptomatology of CHF ▪ Initiating palliative medicine in end stage CHF ▪ Triggers for palliative medicine referrals ▪ Guidelines for palliative medicine referral ▪ Palliative approach in end stage CHF ▪ EOLC in CHF
5.1.3	Chronic Kidney Disease (CKD) and End Stage Renal Disease (ESRD)	▪ Defining CKD and ESRD ▪ Burden of ESRD ▪ Symptom burden of ESRD ▪ Management of pain in patients with ESRD ▪ Managing non-pain symptoms in ESRD, ▪ Non dialysis supportive care approach in CKD/ESRD ▪ Managing end of life in patients on dialysis ▪ Guidelines/recommendations for not

		initiation/withdrawal of dialysis.
5.1.4	End Stage Liver Disease (ESLD)	▪ Defining ESLD ▪ Symptom burden in ESLD and management of ESLD symptoms ▪ EOL transitions in ESLD (Child Pugh's / MELD scoring) ▪ Prognostication in ESLD ▪ Palliative and EOLC approach in ESLD
5.1.5	Palliative Neurology 1 (Symptoms and Impairment)	▪ Specific symptoms in advanced neurological illness (Muscular weakness, spasticity, dystonia, seizures, muscle cramps, involuntary movements, dyskinesia) ▪ Management of impairments secondary to advanced neurological illness (speech difficulty, dysphagia, drooling of saliva, breathing difficulty, urinary retention, bladder spasms, bowel and bladder incontinence, sexual dysfunction, autonomic dysfunction)
5.1.6	Palliative Neurology 2 (Motor Neuron Disease)	▪ Classification, Clinical Presentation ▪ Symptom prevalence in MND ▪ Etio-pathogenesis, impact and management of dysarthria ▪ Management of dysphagia and Sialorrhea ▪ Pain in MND (Etiopathogenesis and Management) ▪ Dyspnea in MND (Management, Non- invasive ventilation, weaning of respiratory support) ▪ Interdisciplinary care in MND ▪ End of Life Care in MND
5.1.7	Palliative Neurology 3 (Other neurological conditions needing Palliative Care)	▪ Palliative Care in cerebrovascular disease ▪ Palliative Care in demyelinating disease ▪ Palliative Care in Parkinson's disease ▪ Palliative Care in Muscular dystrophy ▪ Palliative Care in Huntington's disease ▪ Palliative Care in traumatic and hypoxic brain injury ▪ Palliative care in congenital and acquired peripheral neuropathy
D5.2PALLIATIVE MEDICINE IN HIV/AIDS		
5.2.1	Palliative Medicine in HIV AIDS 1	▪ HIV infections and AIDS (Epidemiology, Biology, Natural History, Pathogenesis, Phases) ▪ Clinical Course of AIDS ▪ AIDS Defining Complex ▪ Anti-retroviral therapy ▪ Infections in an immunocompromised patient

		▪ Non infective complications of HIV/AIDS
5.2.2	Palliative Medicine in HIV AIDS 2	▪ Symptom prevalence in HIV/AIDS ▪ Etiopathogenesis of pain in a patient with HIV/AIDS ▪ Etiopathogenesis of non pain symptoms in a patient with HIV/AIDS ▪ Management of pain and non pain symptoms in HIV/AIDS ▪ Palliative Care in HIV/AIDS (Principles and Approach, Advanced Care Planning, Stopping ART, Stopping infection prophylaxis) ▪ Addressing non physical issues in a patient with HIV/AIDS
CD5.3 PALLIATIVE MEDICINE IN DEMENTIA		
5.3.1	Palliative Medicine in Dementia 1	▪ Epidemiology of Dementia ▪ Pathophysiology and classification ▪ Alzheimer's Disease ▪ Frontotemporal Dementia ▪ Lewy Body Dementia ▪ Dementia in Parkinson's disease, ▪ Dementia due to Huntington's disease, ▪ Vascular Dementia ▪ HIV associated Dementia
5.3.2	Palliative Medicine in Dementia 2	▪ Clinical features of Dementia ▪ Diagnostic criteria according to DSM-5 and ICD-10 ▪ Psychiatric and neurological changes in Dementia ▪ Course and prognosis ▪ Pharmacological and non pharmacological treatment Palliative and end of life care in dementia
CD 5.4 MISCELLANEOUS NON ONCOLOGICAL CONDITIONS		
5.4.1	Palliative Medicine in Hematological Disorders	▪ Challenges and barriers in PC provision in incurable benign hematological disorders ▪ Palliative Care in Sickle Cell Disease (Inheritance, Clinical presentation, symptoms, needs, communication and long term management) ▪ Palliative Care in Thalassemia Major (Inheritance, Clinical presentation, symptoms, needs, communication and long term management) ▪ Palliative Care in other congenital hematological disorders (both anemia and bleeding diathesis)

5.4.2	Palliative Medicine in Immunological Disorders	▪ Palliative Care in advanced Vasculitis ▪ Palliative Care in malignant course of Rheumatoid Arthritis ▪ Palliative care in advanced stages of connective tissue disorders such as Systemic Lupus Erythematosus, Progressive Systemic Sclerosis, Mixed Connective Tissue Disorder, and Sjogren's syndrome etc. ▪ Palliative Care in Progressive Pulmonary Fibrosis
5.4.3	Palliative Medicine in congenital and post traumatic disability	▪ Technical definitions - Disability, Impairment, activity limitation, participation restriction ▪ Classification of disabilities ▪ Interphase of Rehabilitation and PC in a patient with disability ▪ Palliative care for a patient with traumatic paraplegia and quadriplegia ▪ Palliative care for a patients with traumatic brain injuries, persistent vegetative states ▪ Palliative Care in congenital disabilities
SECTION CD6: SUPPORTIVE CARE IN PALLIATIVE MEDICINE		
Sl. No	**Topic**	**Essentials**
CD6.1 MANAGING COMMON COMPLICATIONS IN A PALLIATIVE MEDICINE SETTING		
6.1.1	Dehydration and Shock	▪ Approach to a patient with shock. ▪ Hypovolemic shock diagnosis and management. ▪ Differentiating types of shock. ▪ Types of resuscitation fluids, its constituents and rational use
6.1.2	Fever and Sepsis	▪ Various definitions used in the diagnosis of sepsis. ▪ Fever – Types of fever. ▪ Bacteremia, Septicemia, SIRS, Sepsis, Severe Sepsis, Septic Shock, Refractory Septic Shock, MODS. ▪ Approach to a patient with sepsis. ▪ Complications of sepsis ▪ Managing a patient with sepsis (investigations + treatment). Rational use of broad-spectrum antibiotics
6.1.3	Anemia and Transfusion	▪ Anemia in advanced illness: prevalence, significance, and causes. ▪ Approach to a patient with anemia of chronic disease and cancer. ▪ Approach and diagnostic modalities ▪ Role of iron supplements

		▪ Role of erythropoiesis stimulating agents ▪ Blood and component transfusion ▪ Assessment of fatigue and symptom benefit post blood transfusion ▪ Decision making on withholding transfusion
6.1.4	Anorexia-Cachexia Syndrome (ACS)	▪ Definition and classification of ACS ▪ Etiology of ACS in a Palliative Care setting ▪ Pathogenesis of primary and secondary ACS ▪ Diagnosis, Clinical Presentation and stages ▪ Clinical assessment of ACS ▪ Pharmacological management of ACS ▪ Nutrition in ACS
6.1.5	Thrombotic disorders in Palliative Medicine	▪ Cancer associated thrombosis (pathophysiology + approach) ▪ Swollen legs in a palliative care setting (differentiating venous thromboembolism [VTE] from others), ▪ Recognition, confirmation and management of VTE. ▪ Guidelines on using anti-coagulants in VTE – how long/how to monitor/when to discontinue. ▪ Special situations – SVC thrombosis, portal venous thrombosis, cavernous venous thrombosis.
CD6.2 MANAGING CONCURRENT ILLNESS IN A PALLIATIVE MEDICINE SETTING		
6.2.1	Electrolyte Imbalance 1 Hyponatremia, Hypernatremia	▪ Approach to a patient with hyponatremia. ▪ Hypovolemic hyponatremia ▪ Euvolemic hyponatremia ▪ Hypervolemic hyponatremia. ▪ Approach to a patient with hyponatremia, ▪ Treatment of hyponatremia (using 3% saline and pharmacotherapy of hyponatremia). ▪ Approach to a patient with hypernatremia. ▪ Treatment of hypernatremia.
6.2.2	Electrolyte Imbalance 2 Hypokalemia, Hyperkalemia	▪ Potassium homeostasis ▪ Hypokalemia – (Definition, Etiology, Diagnostic approach/algorithm, Management (Pharmacological/Non Pharmacological). ▪ Hyperkalemia - Definition, Etiology, Diagnostic approach/algorithm, Management (Pharmacological/Non Pharmacological). ▪ Hyper and hypokalemia in a palliative care setting.

6.2.3	Electrolyte Imbalance 3 Hypocalcaemia, Hypercalcemia Hypomagnesaemi, Hypomagnesaemia	▪ Calcium and Magnesium Homeostasis. ▪ Definition, Etiology, Diagnostic approach/algorithm, Management (Pharmacological/Non Pharmacological), specific clinical/laboratory diagnostic tests, prevention, relevance in a palliative care setting of: Hypocalcaemia /Hypercalcemia / Hypomagnesaemia /Hypomagnesaemia
6.2.4	Acid-Base Disorders	▪ General principles of acid-base balance ▪ Definitions and Stepwise approach, ▪ Estimating compensatory responses to primary acid-base disorder ▪ Differential diagnosis ▪ Metabolic acidosis, ▪ Metabolic alkalosis, ▪ Respiratory acidosis, ▪ Respiratory alkalosis
6.2.5	Urinary Tract Infections	▪ Definitions (Asymptomatic bacteruria, Uncomplicated UTI, Complicated UTI) ▪ Risk factors, symptoms and approach to a patient with complicated UTI ▪ Prevention and management of complicated UTI ▪ Catheter associated UTI (prevention and management + IDSA guidelines) ▪ Antimicrobials in prevention and treatment of UTI as per current guidelines ▪ Collecting specimens in UTI
6.2.6	Respiratory Tract Infections	▪ Aspiration pneumonia (risk factors, diagnosis, treatment) ▪ Community Acquired Pneumonia in a patient advanced illness (microbial patterns, diagnosis, treatment) ▪ Pseudomonas Bronchopulmonary infections ▪ Acute exacerbation of COPD. ▪ Viral and fungal lung infections
6.2.7	Gastrointestinal and Hepatobiliary infections	▪ Approach to a patient with diarrhea ▪ Common GI infections in patients with advanced illness (bacterial/viral/parasitic), [approach + diagnosis + treatment] ▪ Hepato-biliary infections (Cholangitis, Hepatitis, Liver abscess) ▪ Peritonitis ▪ Bacterial infections of the oral cavity. ▪ Oral and pharyngeal candida.

6.2.8	Skin and soft tissue infections CNS Infections	▪ Infected pressure sore, ▪ Infected ulcers/wounds, ▪ Cellulitis, ▪ Lymphangitis ▪ Herpes Zoster Meningitis/Meningoencephalitis
CD6.3MANAGING CO -MORBID ILLNESS IN A PALLIATIVE MEDICINE SETTING		
6.3.1	Co- morbid illness 1	▪ Guidelines for management of Diabetes Mellitus in Palliative Medicine setting. ▪ Blood sugar control based on prognosis (years, months, days) ▪ Diabetes Mellitus management in End of Life phase ▪ Pharmacological management in Type 1 and Type 2 Diabetes Mellitus ▪ Insulin preparations – choices, using a sliding scale ▪ Managing corticosteroids induced Diabetes Mellitus ▪ Management of Diabetic Ketoacidosis and Non Ketotic Hyperosmolar state ▪ Recognition and management of Hypoglycemia
6.3.2	Co- morbid illness 2	▪ Optimizing hypertension management and anti-hypertensive choice in palliative care setting ▪ Optimizing ischemic heart disease management and rationalizing use of cardiac drugs and diuretics ▪ Optimizing dyslipidemia and rationalizing use/stopping of lipid lowering drugs ▪ Optimizing use/stopping of anti-platelet drugs and anti-coagulants ▪ Management of other co-morbid illnesses such as (Bronchial Asthma, COPD, Hypothyroidism, Rheumatoid Arthritis etc.)
SECTION CD7: PSYCHOSOCIAL ISSUES IN PALLIATIVE MEDICINE		
Sl. No	**Topic**	**Essentials**
CD 7.1 ILLNESS EXPERIENCE AND SUFFERING		
7.1.1	Illness, Suffering and Psychological issues of dying	▪ Human experience of illness ▪ Psychological response to illness ▪ Defining and understanding suffering ▪ Triangular model of suffering ▪ Dimensions of patient distress/suffering in a life limiting illness context ▪ Dimensions of family distress/suffering in a life limiting illness context

7.1.2	Defense mechanisms and Coping Strategies	▪ Definition of defense mechanisms ▪ Classification of defense mechanisms – Primitive, Immature, Neurotic, Mature Types with examples ▪ Difference between defense mechanisms and coping strategies ▪ Coping strategies – definition, types, explanations and examples ▪ Coping strategies in chronic physical illnesses
7.1.3	Emotional experience of pain	▪ The pain experience ▪ Meaning of pain in terminal illness ▪ Psychological impact of uncontrolled pain ▪ Modulatory systems involved in pain pathway that influence pain perception ▪ Bio-psycho-social factors influencing pain perception ▪ Factors decreasing and increasing pain tolerance
7.1.4	Grief and Bereavement 1	▪ Definitions (Bereavement, Grief, Mourning, Anticipatory Grief, Pathological Grief and Disenfranchised Grief) ▪ Kubler Ross Model – 5 stages of grief ▪ Theories of grief ▪ Normal Grief and Clinical presentation of grief ▪ Factors affecting bereavement outcomes ▪ Typology of palliative care and bereaved families ▪ Recognizing those at risk of complicated grief
7.1.5	Grief and Bereavement 2	▪ Pathological Grief ▪ Clinical presentations of pathological grief ▪ Risk factors for complicated Grief ▪ Prolonged grief disorder ▪ Bereavement follow up and support ▪ Models of grief therapy ▪ Factors predicting outcomes of grief therapy Special bereavement situations
CD7.2 PSYCHIATRY OF PALLIATIVE MEDICINE		
7.2.1	Distress and Adjustment disorder in Palliative Medicine	▪ Epidemiology of Adjustment disorder in PC ▪ Defining distress, NCCN distress thermometer, assessment of distress and causative factors ▪ Distress management ▪ Adjustment disorders – Pathogenesis Diagnostic criteria Clinical Course and presentation Prevention and early detection Management

7.2.2	Depression in Palliative Medicine	▪ Prevalence of depression in cancer, including advanced cancer, terminal illness ▪ Assessment – screening tools ▪ Diagnostic criteria ▪ Risk factors; Mechanisms; Impact on cancer; ▪ Treatment – Psychological and Psychopharmacological ▪ Suicide and desire for hastened death; ▪ Guidelines for management of depression in palliative care
7.2.3	Anxiety in Palliative Medicine	▪ Definition of fear and anxiety ▪ Screening for anxiety ▪ Anxiety subtypes in cancer – Generalized anxiety disorder, Panic disorder, Social anxiety disorder, Specific phobia, ▪ Anxiety due to gen med condition, ▪ Substance induced anxiety disorder, ▪ Anticipatory anxiety and nausea, ▪ Post-traumatic stress disorder; ▪ Assessment and Differential diagnosis ▪ Management – a) Psychological – Cognitive behavioral therapy, Behavioral interventions, Other b) Pharmacological
7.2.4	Dealing with personality traits/disorders in Palliative Medicine practice	▪ Identification of personality trait/disorder, personality characteristics, meaning of illness, Transference/Countertransference response, management of personality and illness ▪ Describing the above in the following personality trait/disorder (Dependent, Obsessive compulsive disorder, Histrionic, Borderline, Narcissistic, Paranoid, Anti- social and Schizoid)
7.2.5	Dealing with patients with severe and other mental illness in Palliative Medicine practice.	▪ Affective disorders ▪ Psychotic disorders ▪ Substance use disorders ▪ Post traumatic disorders ▪ Intellectual disabilities ▪ Approach to a patient with chronic mental illness in PC practice.
7.2.6	Psychological issues in a patient with advanced malignancies	▪ Neuropsychiatric changes in patients with brain tumors and Leptomeningeal disease (Seizures, Loss of motor functions, Headache, alteration mental status, cognitive dysfunction, personality and behavioral changes, anxiety and mood changes and Hallucinations) ▪ Psychiatric symptoms and cerebral tumor location

		▪ Psychiatric issues in other cancers – head and neck, lung, breast, gastrointestinal, prostate, Hemato-lymphoid ▪ Treatment related psychiatric side effects (corticosteroid euphoria, corticosteroid bipolarity, steroid dementia, steroid dependence, body image issues)
7.2.7	Dying Mind	▪ Twilight states ▪ Lightening before death ▪ Near death experiences ▪ Last words ▪ Terminal restlessness
CD7.3 DISTRESS, SPIRITUAL AND EXISTENTIAL ISSUES		
7.3.1	Spiritual and Existential issues in Palliative Medicine	▪ Defining Spirituality, Concepts of Religion and Spirituality ▪ Understanding spiritual distress ▪ Spirituality Assessment and tools used in measuring spiritual distress ▪ Providing spiritual care (who and how) ▪ Components of spiritual care (Humane Presence, Listening and Acknowledging, Helping complete unfinished business, Meaningful Communication, Sustaining Personhood and Reconnecting with the community) ▪ Existential distress and managing Existential issues
CD7.4 PSYCHOSOCIAL SUPPORT		
7.4.1	Care giver support	▪ Types of caregivers ▪ Caregiver burden ▪ Tools to measure caregiver burden ▪ Psychosocial problems of caregivers ▪ Interventions to deal with family caregiver burden ▪ Support groups in Palliative Medicine
7.4.2	Self care	▪ Burnout (Definition, risk factors, markers) ▪ Compassion fatigue ▪ Burnout in PC practice and factors influencing burnout unique to PC ▪ Concept of self care ▪ Self assessment and self care plans ▪ Self care Protective Practices, Protective Skills and Protective Arrangements
SECTION CD8: PEDIATRIC AND GERIATRIC PALLIATIVE MEDICINE, END OF LIFE CARE		
Sl. No	**Topic**	**Essentials**
CD8.1 PEDIATRIC PALLIATIVE MEDICINE		

8.1.1	Introduction to Pediatric Palliative Care	▪ Children needing palliative care (from WHO Global Atlas of Palliative Care 2014) ▪ Edmarc experience ▪ Pediatric Palliative Care in India + Level of integration ▪ WHO definition of pediatric palliative care ▪ ACT/RCPCH pediatric palliative care (PPC) trajectory of illness (Group I to Group IV) ▪ Triaging in pediatric palliative care. (4 triage groups) ▪ Differences between adult and pediatric palliative care ▪ Square of care in PPC ▪ Barriers involved in PPC provision ▪ Broad format of pediatric palliative care provision (Physical, Psycho-social, Spiritual, Advanced Care planning and Practical) – Read from Chapter 194 Declan Walsh. ▪ Models of care in children's palliative care (Foot prints, CHI-PACC, IPPC)
8.1.2	Pediatric Pain 1	▪ Etiological classification of pain in PPC ▪ Algorithm for evaluation of pain in the pediatric population ▪ Pain history taking in PPC ▪ Pain expression in children ▪ Detailed description of various age and situation specific pain assessment scales in children ▪ Guidelines for administering and interpreting pain assessment tools in children ▪ Assessment of impact of pain in children
8.1.3	Pediatric Pain 2	▪ Principles of pharmacological treatment of pain in children ▪ WHO two step ladder for pain management in children ▪ Using non-opioids for pain in children (Drugs, formulations and dosing) ▪ Using opioids for pain in children (Drugs, formulations and dosing) ▪ Adjuvant analgesics for managing pain in children ▪ Non pharmacological management of pain in children
8.1.4	Pediatric non pain symptoms	▪ Pediatric Delirium (Pathophysiology, etiology, clinical presentation, pediatric delirium assessment, using pCAM questionnaire in

		children, pediatric delirium assessment scales, pharmacological and non pharmacological management of pediatric delirium) ▪ Dyspnea and intractable cough in children (etiology, assessment and management) ▪ Assessment and management of nausea and vomiting in children. ▪ Assessment and management of constipation in children
8.1.5	Pediatric Palliative Care in Cancer	▪ Approach to a child with advanced cancer ▪ Supportive Care issues in Pediatric Oncology ▪ Palliative care in specific pediatric solid tumors (Retinoblastoma, PNET, Neuroblastoma, bone tumors, Hepatoblastoma, Wilm's tumor etc.) ▪ Palliative care in specific pediatric Hemato-Lymphoid malignancies
8.1.6	Pediatric Palliative Care in Non Cancer conditions	▪ PPC in chronic pediatric neurodegenerative conditions ▪ PPC in Hemolytic Anemia (Thalassemia and Sickle Cell Disease) ▪ PPC in Cystic Fibrosis ▪ PPC in Congenital Heart Diseases ▪ PPC in Inborn errors of metabolism and chromosomal abnormalities
8.1.7	Psychosocial, communication and ethical issues specific to Pediatric Palliative Care	▪ Children's views of death ▪ Communication with children in PPC ▪ Impact of serious life limiting illness on family - parents and siblings ▪ Psychological adaptation of the dying child ▪ Guidelines for working with the dying child ▪ Decision-making and ethical issues in pediatric palliative care ▪ Factors affecting bereavement and bereavement support and interventions
8.1.8	Adolescent Palliative Medicine	▪ Classification of adolescents based on physical and cognitive states ▪ Life limiting conditions affecting adolescents and young adults needing palliative medicine. ▪ Specific palliative care needs in early/mid/late adolescents ▪ Psycho-social issues specific to Adolescent Palliative Medicine ▪ Manifestations of grief in adolescents age group
CD8.2 GERIATRIC PALLIATIVE MEDICINE		

8.2.1	Aging	▪ Sociodemographics of Aging with emphasis on developing countries; ▪ Theories and Biology of ageing ▪ Physiology of aging ▪ Implications of aging in health care and palliative care
8.2.2	Frailty	▪ Definition ▪ Prevalence ▪ Pathophysiology and clinical features ▪ Tools to measure frailty ▪ Risk factors for falls ▪ Comprehensive assessment and interventions
8.2.3	Management of older individuals needing Palliative Care	▪ Broad dimensions of problems in elderly population ▪ Geriatric assessment and geriatric assessment tools ▪ Common medical problems in elderly and their management ▪ Common psychological/psychiatric morbidity in elderly ▪ Practical, Social and Emotional issues ▪ Decision making, goals of care and end of life care in older individuals receiving PC
CD8.3 END OF LIFE CARE		
8.3.1	End of Life Care 1	▪ Estimating EOLC needs in the community. ▪ Gaps in EOLC needs in India across various clinical setting. ▪ Prognostication ▪ Principles of Good Death ▪ Components of Good Death ▪ Steps involved in providing Good End of Life Care (1. Recognizing the dying process 2. End of Life Decision Making 3. Initiation of EOLC 4. Process of EOLC 5. After death Care) ▪ Recognizing the dying process ▪ EOLC decision making (Timing, Decision Makers, Shared Decision Making)
8.3.2	End of Life Care 2	▪ Ethical aspects specific to EOLC (Autonomy and Beneficence, Autonomy and Non maleficence, Non abandonment and Non Maleficence, Disclosure and beneficence, Fair allocation of societal resources). ▪ Special ethical situations (Futility of treatment and Euthanasia) ▪ Legal aspects of EOL as applicable to India

8.3.3	End of Life Care 3	▪ Principles of EOLC symptom management. ▪ 6 step EOLC approach (Identify – Assess – Plan – Provide – Reassess – Reflect). ▪ Respiratory secretions in EOLC. ▪ Nursing Interventions in EOLC. ▪ Palliative Sedation. ▪ Silver hour ▪ End of Life Care process and pathways
8.3.4	End of Life Care 4	▪ Principles of after death care. ▪ 4 step approach in verification and certification of death (verification – certification – reporting – registration). ▪ International guidelines for verification of death. Verification of death in primary care, hospital, ICU and comatose patients. ▪ Registration of Births and Death Act 1969. ▪ Writing a death certificate. Death Certificate form. When not to issue death certificate. ▪ 6 recommendations of IAPC consensus position statement on EOLC policy. ▪ IAPC + ISSCM joint society 12 step guidelines on EOLC.
SECTION CD9: SPECIAL TOPICS IN PALLIATIVE MEDICINE		
Sl. No	**Topic**	**Essentials**
CD9.1 SPECIAL TOPICS IN PALLIATIVE MEDICINE		
9.1.1	Sleep in Palliative Medicine	▪ Sleep physiology ▪ Sleep theories ▪ Sleep disturbances in advanced cancer ▪ Tools to measure sleep related parameters; ▪ Management of sleep disorders
9.1.2	Body image and Sexuality in Palliative Medicine	▪ Body image and sexuality in different illnesses ▪ Sexuality in cancer ▪ Psychosocial predictors of sexual functioning after cancer ▪ Sexual history taking ▪ PLISSIT model ▪ Interventions to improve sexual functioning
9.1.3	Ethical Issues in Palliative Medicine 1 (Basics)	▪ Principles and theories ▪ Cardinal principles of Medical Ethics and its application (Autonomy, Beneficence, Non Maleficence, Justice) ▪ Decision making capacity/Surrogate Decision making ▪ Confidentiality ▪ Informed Consent

9.1.4	Ethical Issues in Palliative Medicine 2 (Special situations)	▪ Limitation of disease modifying treatment ▪ Withholding and withdrawing of life sustaining treatment ▪ Nutrition and Hydration ▪ Ethical situations in end of life decision making and end of life care ▪ Conflict and Collusions ▪ Palliative care research
9.1.5	Advanced Directives and Advanced Care Planning	▪ Definition of Advance Directives (AD) ▪ Types of AD ▪ Components of AD ▪ Evidence for AD ▪ Definition of Advance Care Planning (ACP) ▪ Differences between AD and ACP ▪ Components of effective ACP ▪ Evidence for ACP
9.1.6	Communication Skills training 1 (Basics of Communication and Breaking Bad News)	▪ Basics of communication ▪ Patient centered communication (Goals of patient centered communication, Active Listening, Pre-requisites for good communications, Outcomes of good communication) ▪ Verbal and Nonverbal behaviors ▪ Basics of bad news and truth telling ▪ SPIKES Protocol/CLASS Approach in Breaking Bad News (BBN) ▪ Unhelpful statements/Avoiding Pitfalls/Barriers and Reactions to BBN (All these discussions should be undertaken along with Role Play)
9.1.7	Communication Skills training 2 (Dealing with Common Communication Issues)	▪ Informed consent ▪ Decision making ▪ Uncertainty ▪ Denial ▪ Collusion ▪ Conflict ▪ Anger ▪ Medical errors (All these discussions should be undertaken along with Role Play)
9.1.8	Communication Skills training 3 (Advanced Medical Communication Situations)	▪ Cessation of disease modifying care ▪ Transition of care ▪ Discussing prognosis and life expectancy ▪ Discussing future symptoms ▪ Discussing goals of care ▪ Discussing life sustaining treatment

		▪ End of life care communication (All these discussions should be undertaken along with Role Play)
CD9.2 PALLIATIVE MEDICINE IN SPECIAL SITUATIONS		
9.2.1	Palliative Medicine in Bone Marrow/Stem Cell Transplantation	▪ Physical symptoms specific to stem cell transplantation ▪ Psychosocial issues specific to stem cell transplantation ▪ Management of physical symptoms – Rational Pharmacology specific to SCT ▪ Management of psychosocial issues – Rational Psychopharmacology specific to SCT ▪ Communication issues in SCT ▪ Transitions of care and End of Life in SCT.
9.2.2	Palliative Medicine in Intensive Care	▪ Situations in intensive care setting where palliative care is appropriate ▪ Approach, decision making and transitions of care in ICU ▪ Communication with families regarding palliative care in ICU setting ▪ Ethical and legal considerations of limiting life sustaining treatment in ICU ▪ Guidelines for limiting life sustaining treatment and providing palliative care/end of life care in ICU
9.2.3	Perinatal Palliative Medicine	▪ Definition and scope of perinatal palliative medicine ▪ Conditions suitable for perinatal palliative medicine ▪ Pain assessment in fetuses and newborn ▪ Stages of planning in perinatal palliative medicine (Antenatal planning, pre birth care, intrapartum and postpartum care) ▪ End of life care decisions in babies with adverse prognosis
CD9.3 PROCEDURES, INTERVENTIONAL TECHNIQUES IN PALLIATIVE MEDICINE		
9.3.1	Procedures and Interventional techniques in Palliative Medicine 1	▪ Parenteral opioid infusions, setting up a syringe driver, syringe driver compatibility, dosing and titration, monitoring, anticipating complications and mitigation mechanisms ▪ Epidural and Intrathecal Analgesia, technical aspects of procedure, dosing and titration, managing a patient with Epidural and Intrathecal catheter, Early and Late complications of intrathecal and epidural analgesia Site specific neurolytic procedures

9.3.2	Procedures and Interventional techniques in Palliative Medicine 2	▪ Oxygen, Oxygen delivery systems, cannula masks and venture, non invasive ventilation, Tracheostomy ▪ Abdominal paracentesis, pleurocentesis, pericadiocentesis, Intercostal drains ▪ Nasogastric/Nasojejunal tubes, Percutaneous gastrostomy, Feeding Jejunostomy, peritoneal catheter for ascetic tap, percutaneous biliary drainage and other stenting procedures ▪ Urinary catheters including suprapubic, Percutaneous nephrostomy, DJ stenting
CD 9.4 INTEGRATIVE MEDICINE IN PALLIATIVE MEDICINE		
9.4.1	Integrative Medicine1	▪ Integrative Medicine Classification ▪ Integrative Medicine -PC Inter-phase ▪ Integrative Medicine interventions
9.4.2	Integrative Medicine 2	▪ Integrative Medicine in Pain Management ▪ Integrative Medicine in Management of Nausea ▪ Integrative Medicine in Management of Dyspnea ▪ Integrative Medicine in Management of Fatigue, Anorexia Cachexia Syndrome ▪ Integrative Medicine in Anxiety and Depression ▪ Evidence based clinical practice guidelines for management for Integrative Oncology, Integrative Medicine and Botanical preparations
SECTION CD10: NURSING AND REHABILITATIVE CARE IN PALLIATIVE MEDICINE		
Sl. No	**Topic**	**Essentials**
CD10.1 NURSING CARE IN PALLIATIVE MEDICINE		
10.1.1	Care of Stomas 1 (Colostomy and Ileostomy)	▪ Classification and detailed description of each types) (Temporary Colostomy, Decompressive Colostomy, Diverting Colostomy, Permanent Colostomy, Ileostomy) ▪ Management of a patient with colostomy and ileostomy (Pre-op education, facilitating adaptation, pouching, odor and gas management, Activities in a patient with colostomy-ADLs, sexual activity, travel, sports etc.) ▪ Dietary management of a patient with colostomy and ileostomy ▪ Ileostomy care and special issues in Ileostomy care ▪ Colostomy irrigation ▪ Complications of colostomy and ileostomy and management of complications ▪ Patient education and information

10.1.2	Care of Stomas 2 (Tracheostomy, Urostomy, Gastrostomy)	▪ Timing and indications for tracheostomy ▪ Techniques and contraindications for tracheostomy ▪ Immediate post-op care in tracheostomy ▪ Technique of changing the tracheostomy tube – things to look for ▪ Decannulation ▪ Complications in a patient with Tracheostomy ▪ Nursing care of a patient with tracheostomy ▪ Patient education and information ▪ Urinary diversion – overview and indications ▪ Ileal conduit and continent cutaneous diversions ▪ Complications of urinary diversion procedures ▪ Nursing care of a patient with ileal conduit ▪ Care of a patient with percutaneous nephrostomy. ▪ Care of Gastrostomy and Jejunostomy ▪ Care of a patient with Nasogastric and Nasojejunal tube.
10.1.3	Lymphedema	▪ Anatomy and Physiology of Lymphatic system ▪ Pathophysiology and classification ▪ Cancer associated Lymphedema ▪ Clinical features and staging of Lymphedema ▪ Approach to a patient with Lymphedema (History and Examination) ▪ Clinical and anthropometric measurements and relevant investigations ▪ Differential diagnosis and complications ▪ Prevention of Lymphedema ▪ Treatment of Lymphedema ▪ Complete Decongestive Therapy (CDT) in Treatment Phase and Maintenance Phase ▪ Components of CDT (Manual lymphatic draining, compression bandaging and garments, Exercise and Elevation, Skin care) ▪ Devices used in management of Lymphedema Pharmacological treatment of lymphedema
10.1.4	Malignant Wounds, Chronic Malignant/Non Malignant Fistulas and Sinuses	▪ Tumor Necrosis (Definition, Pathophysiology, Assessment and Management) ▪ Comprehensive assessment of a malignant wound ▪ Management of a malignant wound (Exudate, Odor, Bleeding, Infection, Pain) ▪ Myiasis (Maggots) ▪ Topical dressings and drugs used in

		management of malignant wound ▪ Fistulas (Definition, Pathophysiology, Assessment and Management) ▪ Sinuses (Assessment and Management)
10.1.5	Pressure Ulcers	▪ Pathogenesis and risk factors for pressure ulcers ▪ Risk prediction scales (Norton and Braden) ▪ Clinical features ▪ NPUAP staging ▪ Stage wise management of pressure ulcers ▪ Local measures and dressing used ▪ Role of surgical interventions in pressure ulcers ▪ Other treatment techniques (negative pressure therapy, hyperbaric oxygen, ultrasound, electrical stimulation) ▪ Prevention of pressure ulcers (pressure redistribution techniques, positioning techniques, skin care, other supportive techniques-mobility/nutrition etc.) ▪ Infectious and non-infectious complications of pressure ulcers ▪ Patient education and information
10.1.6	Bladder and Catheter Care	▪ Catheter associated UTI (Risks, mechanisms, Diagnostic criteria, Clinical features, common organisms, complications) ▪ Management of catheter associated UTI (Stepwise protocol, Antibiotic regimes, Supportive treatment) ▪ Common types of catheters and bags (Catheter makes, balloon types, balloon sizes, catheter sizes and diameters, bags and insertion gel) ▪ Technique of insertion and removal ▪ Types of catheterization (short/intermediate and long term) ▪ Catheterization methods (Intermittent, indwelling, suprapubic, condom) ▪ Problems associated with long term catheter ▪ Principles of care of urinary catheter ▪ Patient education and information
10.1.7	Oral Care 1	▪ Clinical Assessment of Oral Cavity – 8 component assessment (Voice, Swallowing, Lips, Tongue, Saliva, Gums, Teeth/Dentures, Mucus Membrane) ▪ Five stage model of Oral Mucositis (OM) ▪ Causes and etiopathogenesis of OM ▪ WHO Scale/NCI-CTC-AE Grade of OM ▪ Clinical Stages of OM

		▪ Management of OM (Stepped Protocol – Basic Oral Care, Bland Rinses, Topical Analgesics/Anesthetics/Mucosal Coating agents, Systemic Analgesics) ▪ Combination Mouth Washes (Miracle Mouth Wash 1 and 2/Magic Mouth Wash etc.) ▪ Prevention of OM
10.1.8	Oral Care 2	▪ Halitosis (3 stage scale/Organoleptic Scoring Scale, Assessment and Management) ▪ Xerostomia (Definition, Pathophysiology, Etiology, Xerostomia index, Sialagogues, Non Pharmacological Management) ▪ Sialorrhea (Assessment and Management) ▪ Dysgeusia (Assessment and Management) ▪ Oral Candida (Causative organisms, Clinical types, Clinical Presentation, Treatment and Prevention) Bacterial and viral infections of oral cavity
10.1.9	Incontinence Care	▪ Bladder physiology including nerve supply ▪ Urinary Incontinence (Definition, Pathophysiology and Epidemiology) ▪ Clinical types of Urinary Incontinence with detailed description of each type (Urge, Stress, Mixed, Overflow, Continuous) ▪ Algorithm of assessment and management of Urinary Incontinence (including etiology for each type) ▪ Pharmacological management of Urinary Incontinence ▪ Overall management of each type of urinary incontinence ▪ Fecal incontinence (Epidemiology, pathophysiology, clinical presentation) ▪ Algorithm for evaluation of a patient with fecal incontinence ▪ Management of fecal incontinence and general bowel management ▪ Management of a patient with Vesico-Vaginal fistula and Recto-Vaginal fistula
10.1.10	Nursing Care in Bedridden patients and patients with altered mental status	▪ Common nursing issues in a bedridden patient ▪ Common nursing issues in a unconscious patient ▪ Assessment and management of nutritional needs, airway protection and prevention of aspiration, skin care, positioning, bowel

		management, mucosal care, prevention of delirium and depression, preventing infections, safety and fall prevention
10.1.11	Nursing Care in End of Life	▪ Assessment of end of life care symptoms ▪ Assessment of non physical needs in end of life ▪ Anticipatory prescription and prompt response to symptoms ▪ Non pharmacological management of respiratory secretions, pain, restlessness, dyspnea ▪ CAM therapies in end of life ▪ After death care
CD10.2 REHABILITATIVE CARE IN PALLIATIVE MEDICINE		
10.2.1	Quality of Life, Performance Status and Mobility	▪ Definition and structure of quality of life ▪ Multidimensional assessment of QOL ▪ Health related QOL in PC ▪ Karnofsky Performance Scale (Uses, Structure, Validity) ▪ Eastern Cooperative Oncology Group (ECOG) Scale (Uses, Structure, Validity) ▪ Barthel index
10.2.2	Medical Rehabilitation of a Palliative Care Patient 1	▪ Rehabilitation in Palliative Care ▪ Rehabilitation team ▪ Needs assessment, integration, goal setting and delivery ▪ Pulmonary Rehabilitation ▪ Speech and language rehabilitation ▪ Swallowing rehabilitation
10.2.3	Medical Rehabilitation of a Palliative Care Patient 2	▪ Rehabilitation of palliative care patients with motor deficits ▪ Rehabilitation of palliative care patients with sensory deficits ▪ Rehabilitation of palliative care patients with cranial nerve deficits ▪ Rehabilitation of palliative care patients with cognitive dysfunction ▪ Rehabilitation of palliative care patients with deconditioning
10.2.4	Nutrition and Hydration in Palliative Medicine	▪ Nutrition and cancer/chronic illness ▪ Nutritional and Hydration assessment ▪ Principles of nutrition therapy (Indications and routes) ▪ Enteral and parenteral nutrition in terminally ill patient ▪ Hydration in a terminally ill patient.

B. AFFECTIVE DOMAIN (ATTITUDES AND VALUES DOMAIN)

Postgraduate Trainee Resident pursuing MD (Palliative Medicine) course is expected to acquire following attitudes and values. [AD=Affective Domain]

AD1. PALLIATIVE CARE PRINCIPLES	
AD1.1	Recognizes pain, symptoms and suffering in patients with advanced life limiting illness
AD1.2	Recognizes the need for relief of psychosocial, spiritual and existential suffering
AD1.3	Recognizes the need for appropriate care and support for the family and caregivers
AD1.4	Recognizes that the care is person centered, personalized and holistic aiming to improve physical symptoms, suffering and quality of life.
AD1.5	Recognizes the vast unmet palliative care needs in the population
AD1.6	Understands principles of palliative care and its application
AD1.7	Recognizes the need to advocate for the patients needing palliative care
AD1.8	Understands various modes and models of palliative care delivery
AD1.9	Recognizes the need for palliative care policy at institutional/national level and recognizes the need for developing the same.
AD1.10	Recognizes the need for palliative care quality standards and implementation of the same
AD2. PAIN AND SYMPTOM MANAGEMENT	
AD2.1	Demonstrates interest and openness in dealing with pain and symptoms
AD2.2	Exhibits leadership and responsibility in dealing with patients with poorly controlled and intractable pain and symptoms
AD2.3	Exhibits safe prescription writing, exhibits care while prescribing medications for pain and symptom control and recognizes the need to identify aberrant drug use/drug diversion
AD2.4	Recognizes the role of cognitive, emotional, and spiritual factors in the symptom experience
AD2.5	Recognize the impact of pain and physical symptoms on activities of daily living, sleep, mood, sexual activity and other social domains
AD2.6	Recognizes the value of a multidisciplinary approach to symptom management
AD2.7	Recognizes and initiates appropriate referral to other pain management services as needed
AD2.8	Recognizes the role and importance of parenteral and interventional pain management in patients with intractable pain.
AD2.9	Recognizes the need to initiate palliative sedation in suitable patients with intractable symptoms

AD2.10	Exhibits a compassionate attitude towards the patients with pain and symptoms
AD3. CLINICAL EXPERT	
AD3.1	Recognizes palliative care needs in a patient with advanced cancer
AD3.2	Expresses the palliative care needs of patients with advanced cancer to the treating oncologist and advocates for early palliative care referral
AD3.3	Recognizes palliative care needs in non-oncology conditions such as end stage organ failures, advanced HIV/AIDS, chronic neurodegenerative conditions etc.
AD3.4	Expresses the palliative care needs of patients with advanced non-oncological
	conditions to the concerned specialists and advocates importance of palliative care referral
AD3.5	Recognizes supportive care needs in patients with advanced life limiting illness and understands importance of supportive care in length and quality of life
AD3.6	Recognizes complications in patients with advanced life limiting illness and initiates appropriate management after thorough consideration of benefits and futility
AD3.7	Recognizes comorbid conditions in patients with advanced life limiting illness and provides appropriate management or referral to the concerned specialist
AD3.8	Recognizes emergencies in palliative care
AD3.9	Recognizes the importance of managing palliative care emergencies and provides appropriate situation specific care after thorough consideration of benefits and futility
AD3.10	Recognizes and initiate appropriate referral to other specialist services disease management provided such referral positively impacts symptom control and quality of life.
AD4. PSYCHOSOCIAL, EMOTIONAL AND SPIRITUAL SUPPORT	
AD4.1	Recognizes the need for comprehensive assessment of socioeconomic status, caregiver support, social and financial support and living conditions of the patient and family
AD4.2	Understands and evaluates psychological and emotional concerns of patients and their families
AD4.3	Recognizes distress and exhibits an empathic approach to patient and family
AD4.4	Recognizes the need for involvement of other appropriate health professionals, e.g. social workers/psychologists/counselors, as needed in assessment and management of distress
AD4.5	Recognizes anxiety, depression and other psychiatric morbidity prior and occurring during illness
AD4.6	Recognizes the need to consult with psychiatric services when appropriate

AD4.7	Exhibits holistic approach towards care of patients with psychiatric complications
AD4.8	Recognizes patients with intentional self harm behavior and suicidal ideations
AD4.9	Recognizes that spirituality is an integral part of a patient's experience
AD4.10	Recognizes that spiritual pain can contribute to suffering and recognizes the contribution of the spirituality to hopelessness and meaning of life
D5. MULTIDISCIPLINARY CARE	
AD5.1	Chooses to be a team player and openly supports team activity
AD5.2	Recognizes the importance of team cohesiveness and strives towards same
AD5.3	Exhibits participation in a multidisciplinary team and recognizes importance
	and contributions of each team member
AD5.4	Exhibits contribution towards multidisciplinary team meeting and recognizes the need to work cohesively with other member team members to achieve a common goal.
AD5.5	Recognizes the need to participate in interdisciplinary team meetings such as disease management groups, tumor board meeting, joint clinics etc.
AD5.6	Recognizes the need to advocate for patients in interdisciplinary team meetings and advocate for patients with other specialists.
AD5.7	Exhibits consideration and respect for opinions of members of multidisciplinary and interdisciplinary teams
AD5.8	Recognizes the need for educational activities within the multidisciplinary team
AD5.9	Recognizes need to create research opportunities within multidisciplinary / interdisciplinary team
AD5.10	Recognizes the need for team building exercises
AD6. SHARED DECISION MAKING	
AD6.1	Exhibits a non-judgmental attitude towards value and belief systems of patients and families
AD6.2	Recognizes the need to participate in shared decision-making to ensure that outcomes are compatible with the values and belief systems of patients and families.
AD6.3	Recognizes that relationships with patients and their families based on mutual understanding, trust, respect, and empathy facilitate good decision making
AD6.4	Recognizes importance of good decision-making and adverse outcomes of poor decision-making resulting in inappropriate care.
AD6.5	Recognizes the need to discuss possible therapies available to a patient in an open and non-judgmental manner
AD6.6	Recognizes the limitations as well as the strengths of curative and disease modifying treatment in patients with progressive, life-threatening illness

AD6.7	Recognizes the need to participate in important decision-making situations such as cessation of disease modifying treatment, transitions of care, discussion of goals of care etc.
AD6.8	Recognizes the need to participate and provide input during advanced care planning.
AD6.9	Recognizes the need to participate in discussions around withholding and withdrawing life support
AD6.10	Recognizes the need to participate in end of life care decision making
AD7. COMMUNICATION	
AD7.1	Exhibits participation in honest, accurate health related information sharing in a sensitive and suitable manner
AD7.2	Recognizes that being a good communicator is essential to practice effectively in Palliative Medicine
AD7.3	Exhibits effective and sensitive listening skills
AD7.4	Recognizes the importance and timing of breaking bad news and knows when not to discuss these issues.
AD7.5	Exhibits participation in discussion of emotional and existential issues
AD7.6	Exhibits competence and sensitivity in discussing transitions, palliative care and end-of-life issues.
AD7.7	Exhibits willingness to talk openly about death and dying with patients, family, other health professionals, and the general community
AD7.8	Exhibits leadership in handling complex and advanced communication related issues
AD7.9	Recognizes the importance of patient confidentiality and the conflict between confidentiality and disclosure.
AD7.10	Recognizes the value of self evaluation and finessing of one's own communication skills
AD8. PEDIATRIC AND GERIATRIC CARE	
AD8.1	Recognizes varied presentation of pain and symptoms in children in different age groups
AD8.2	Recognizes varied physical, emotional and psychological needs of children and adolescents in different age group
AD8.3	Recognizes developmental influences on pain assessment and management
AD8.4	Recognizes the need for varied communication approach in children in different age groups
AD8.5	Recognize importance of communication with parents/grandparents/siblings and extended family
AD8.6	Recognizes how pediatric palliative care differs from adult palliative care
AD8.7	Recognizes the importance of working in a pediatric multidisciplinary team

AD8.8	Recognizes the multiple dimensions of old age problem
AD8.9	Recognizes frailty, disability, physical and psychosocial needs of older individuals
AD8.10	Recognizes the importance of preserving functionality, preventing complications, managing co morbidity and maintaining dignity and quality of life.
AD9. END OF LIFE CARE	
AD9.1	Recognizes the terminal phase
AD9.2	Exhibits compassionate care of dying patients and their families
AD9.3	Exhibits readiness to continually care for the dying person and support their family
AD9.4	Exhibits a considerate, holistic end of life care approach
AD9.5	Recognizes the emotional challenges, grief and loss in themselves, other staff and families
AD9.6	Recognizes end of life symptoms and initiates appropriate management
AD9.7	Recognizes non physical needs during end of life and recognizes the spirituality of the dying person
AD9.8	Recognizes the importance of advanced sensitive communication during end of life phase
AD9.9	Exhibits respect for the body after death, supporting individual religious and cultural practices
AD9.10	Recognizes a need for an improved community awareness of end of life care and recognizes a need for institutional/national end of life care policy.
AD10. PROFESSIONALISM AND ALTRUISM	
AD10.1	Recognizes limitations of self and recognizes need to seek appropriate help/support when required
AD10.2	Recognizes the need to participate in personal reflection and exercise mindful practice
AD10.3	Exhibits willingness to acknowledge one's own potential issues of loss and grief
AD10.4	Recognizes care boundaries, limitations of care and need to manage expectations.
AD10.5	Exhibits appropriate respect for the opinions of colleagues while advocating for palliative care
AD10.6	Exhibits leadership but also respect the leadership of others within the interdisciplinary palliative care team when appropriate
AD10.7	Exhibits leadership and willingness to advocate for the socially disadvantaged and vulnerable population needing/receiving palliative care
AD10.8	Recognizes the need to empower patients and their families facing life limiting/terminal illness
AD10.9	Recognizes burn out symptoms in self and amongst members of the team and institutes early mitigation measures
AD10.10	Recognizes the importance of self care and extend care to other members of the team

C. PSYCHOMOTOR DOMAIN (SKILLS DOMAIN)

Postgraduate Trainee Resident pursuing MD (Palliative Medicine) course is expected to develop following procedural and non-procedural skills. [PD=Psychomotor Domain]

Clinical Skills:

PD1. COMMUNICATION SKILLS	
PD1.1	Able to establish rapport and therapeutic bonding with patients of different ages, gender, religious and cultural background, socioeconomic groups, and various illnesses/stages in illness trajectory
PD1.2	Able to obtain comprehensive and relevant history from patients, their families and referring teams
PD1.3	Able to comprehend patient's and family wishes/preferences regarding information sharing and the extent of information they would like to receive
PD1.4	Able to break bad news and convey other health related information to patient and their family in a sensitive and caring manner
PD1.5	Able to comprehend patient's understanding of information received, and respond to the reactions and clarify any misunderstandings
PD1.6	Able to handle complex communication related issues such as denial, conflict, collusion etc. within the family in a sensitive, non judgmental, culturally appropriate and respectful manner
PD1.7	Able to take lead in advanced medical communication related issues such as cessation of disease modifying treatment, transition of care, goals of care etc.
PD1.8	Able to overcome barriers related to communication
PD1.9	Able to communicate clearly and effectively within the interdisciplinary/ multidisciplinary teams, referring physician's family physicians such that appropriateness and continuity of care is maintained.
PD1.10	Able to maintain clear, concise, accurate medical records
PD2. DECISION MAKING SKILLS	
PD2.1	Able to assess the extent to which patient and caregivers would like to be part of decision making.
PD2.2	Able to understand patient's and caregivers expectations, wishes and preferences regarding management of the illness at hand and its complications
PD2.3	Able to facilitate patient and caregiver's participation in important treatment relate decision-making and care process.
PD2.4	Able to discuss treatment options, its continuation and cessation, alternatives to treatment with patient and caregiver so that they are able to make informed decisions
PD2.5	Able to ascertain patient and caregivers understanding of illness, clinical outcomes and prognosis to facilitate appropriate future care.

PD2.6	Able to conduct a family meeting ensuring participation of patient/care givers and members of interdisciplinary / multidisciplinary team to facilitate informed/shared decision-making.
PD2.7	Able to take lead in important decision making situations like cessation of disease modifying treatment and transition of care process
PD2.8	Able to provide input during Advanced Care Planning
PD2.9	Able to take lead during discussion and decision making during withholding/ withdrawing life sustaining treatment and cessation of supportive care treatment
PD2.10	Able to take lead during end of life discussion and decision-making.
PD3. PAIN AND SYMPTOM MANAGEMENT SKILLS	
PD3.1	Able to perform a thorough history and examination and detailed clinical assessment of pain and other symptoms
PD3.2	Able to assess pain and other symptoms in patients from different age groups, socio cultural and religious backgrounds, clinical and mental status and disease states
PD3.3	Able to relate pain and other symptoms to underlying patho physiological mechanisms and plan rational pharmacological and non-pharmacological treatment
PD3.4	Able to rationalize and choose appropriate investigations in patients with pain and other symptoms, if there is scope to mitigate the symptom(s) or avoid complications
PD3.5	Able to plan treatment for pain and symptoms in the context of disease status, prognosis, appropriateness and patient and family preferences and wishes
PD3.6	Able to choose pharmacological treatment of pain and other symptoms based on the age, renal and hepatic parameters, response, tolerance and adverse effects.
PD3.7	Able to choose right patients for anti-cancer therapies and other disease modification treatments for pain and symptom control and improved quality of life.
PD3.8	Able to handle/use parenteral strong opioids and administer opioids for pain control through subcutaneous and intravenous routes.
PD3.9	Able to mix drugs in a syringe driver, know compatibilities during drug mixing and able to titrate the doses to achieve optimal pain and symptom control
PD3.10	Able to manage a patient with an epidural and intrathecal catheter and able to assist/perform simple neurolytic procedure.
PD4. SUPPORTIVE CARE AND DISEASE MANAGEMENT SKILLS	
PD4.1	Able to know the natural history of cancer, epidemiology, behavior, anti- cancer therapies, transition points, palliative phase, non responsive to treatment and stopping treatment to facilitate early and appropriate referral.
PD4.2	Able to understand cancer illness trajectory and able estimate prognosis in a patient with advanced cancer

PD4.3	Able to initiate referral for disease modifying treatment or management of complications to a concerned specialist with a goal of improved symptom control and betterment of quality of life.
PD4.4	Able to guide families regarding newer anti-cancer therapies/trial treatments/Integrative Medicine therapies.
PD4.5	Able to meet palliative care needs of end stage organ failures such as advanced congestive heart failure, advanced chronic obstructive lung disease, end stage chronic kidney disease etc.
PD4.6	Able to meet palliative care needs of patients with advanced HIV/AIDS
PD4.7	Able to meet palliative care needs of patients with chronic neuro-degenerative conditions such as Dementia, Motor Neuron Diseases etc.
PD4.8	Able to manage emergencies and complications related to the disease/disease progression such as malignant spinal cord compression, malignant superior venacaval obstruction, airway obstruction, hemorrhage etc. in a way that positively influences illness trajectory/life and be aware of situations when management of these are futile.
PD4.9	Able to manage concurrent illnesses such as infections/sepsis, metabolic disturbances, anemia, thrombosis etc. in a way that positively influences illness trajectory/life and be aware of situations when management of these are futile.
PD4.10	Able to manage co-morbid illnesses such as hypertension, diabetes mellitus, ischemic heart disease etc. and able initiate referral to concerned specialist as required.
PD5. PSYCHOSOCIAL SUPPORT SKILLS	
PD5.1	Able to assess and appraise patient's psychological, social, financial, spiritual and existential concerns
PD5.2	Able to identify and quantify distress and provide support to patients and families
PD5.3	Able to handle distressing emotions, anger, blame, guilt etc. in patients and their families respectfully and sensitively in a non judgmental manner
PD5.4	Able to identify spiritual issues and perform assessment of spiritual concerns
PD5.5	Able to identify spiritual distress and spiritual nature of suffering and provide spiritual care by self or with the help of chaplain
PD5.6	Able to perform detailed mental status examination and identify and manage adjustment disorders, anxiety and depression
PD5.7	Able to assess a patient with psychiatric morbidly, seek help from the psychiatrist/clinical psychologist and formulate a management plan
PD5.8	Able to identify patients/caregivers at risk of intentional self harm and with suicidal ideations and initiate a emergency management plan
PD5.9	Able to explore and discuss issues related to body image changes/disfigurement and sexuality in a sensitive and respectful manner
PD5.10	Able to counsel the patients and caregivers in a scientific and rational manner

	addressing their needs.
PD6. MULTI DISCIPLINARY CARE AND TEAM MANAGEMENT SKILLS	
PD6.1	Able to facilitate creation of a multidisciplinary team comprising of health professionals from a range of disciplines and expertise
PD6.2	Able to work as a member of team and able to be a team player.
PD6.3	Able to take up leadership, ensure participation and coordinated work of members of multidisciplinary team to achieve a common goal
PD6.4	Able to recognize value and contributions of members of multidisciplinary team and able to delegate responsibilities.
PD 6.5	Able to respect opinions of the members of the multidisciplinary team and able to resolve team conflicts.
PD 6.6	Able to attend interdisciplinary meetings such as tumor board meetings, disease management group meetings, joint clinics etc.
PD 6.7	Able to make relatable contributions to these interdisciplinary meetings and advocating for appropriate care and palliative care
PD6.8	Able to respect opinions of the other specialists and also respectfully disagree the decisions of the other clinicians if they are not in the best interest of the patient.
PD 6.9	Able to carry out education, view sharing and other team building exercises.
PD 6.10	Able to facilitate research opportunities in a multidisciplinary and interdisciplinary setting.
PD7. END OF LIFE CARE SKILLS	
PD7.1	Able to recognize terminal phase and diagnose dying. Able to assist peers to recognize dying and facilitate appropriate care
PD7.2	Able to participate in end of life decision-making with the other specialists and arrive at consensus, appropriate and patient centered clinical decision and goals of care.
PD7.3	Able to participate in end of life decision-making with the families, empowering shared decision making and able to communicate effectively end of life concerns and prognosis.
PD7.4	Able to discuss with patients and families regarding preferred place of care.
PD7.5	Able to assess appropriateness of initiation of end of life care process. Able to understand, use, educate and implement end of life care pathway and process.
PD7.6	Able to understand and apply ethical and legal aspects pertaining to end of life care.
PD7.7	Able to effectively assess physical and non-physical needs of a dying person and provide appropriate pharmacological, nursing and psychosocial support.
PD7.8	Able to identify families who will be at high risk of bereavement.
PD7.9	Able to discuss, educate and advocate for end of life care with the peers, institution and community at large.
PD7.10	Able to advocate for hospital end of life care policy and hospital directives for

	withholding/withdrawing life support.
PD8. PROCEDURAL SKILLS	
PD8.1	Able to perform insertion of subcutaneous and intravenous lines, able to administer medications for pain and symptom control through subcutaneous and intravenous route
PD8.2	Able to set up a syringe driver, calculate doses, mix drugs, know compatibility and administer medications as a continuous infusion.
PD8.3	Able to handle various types of syringe drivers, PCA pumps, continuous ambulatory drug devices etc. knows how to handle these instruments.
PD8.4	Able to perform diagnostic and therapeutic paracentesis and pleurocentesis.
PD8.5	Able to insert nasogastric and assisted Nasojejunal tubes. Able to insert indwelling urinary catheters and care for a patient with a catheter.
PD8.6	Able to recognize and manage a pressure ulcer and malignant wound. Able to do wound dressing in different kinds of wounds with various dressing. Able to manage complications of wounds such as bleeding, foul smell, Myiasis etc.
PD8.7	Able to manage and care for a patient with stoma: Tracheostomy Care, Gastrostomy, and Colostomy Care. Able to perform high up enemas and colostomy irrigation
PD8.8	Able to use oxygen, nebulizers and other non-invasive respiratory support devices
PD8.9	Able to manage a patient with Lymphedema. Able to perform complete decongestive therapy using Lymphedema Bandage, Massage and Exercise.
PD8.10	Able to care for the dying patients, plan and administer palliative sedation in dying patients with intractable symptoms.
PD9. QUALITY ASSURANCE, EDUCATION AND RESEARCH SKILLS	
PD9.1	Able to participate in departmental quality assurance activities and implement quality improvement strategies such as audit processes
PD9.2	Able to monitor effectiveness of the program and reduce lapses in care process and medical errors
PD9.3	Able to develop departmental/institutional clinical management algorithms and standard operating procedures.
PD9.4	Able to provide high level of teaching skill and actively participate in departmental and hospital educational programs
PD9.5	Able to involve actively in conducting sensitization programs, certificate courses, CMEs and national/international conferences
PD9.6	Able to initiate/encourage research in Palliative Care
PD9.7	Able to seek permission from institutional review board and undertake ethical research
PD9.8	Able to voluntarily express self-awareness of conflict of interest
PD9.9	Able to conduct blinded randomized studies and observational

PD9.10	Able to critically analyze RCTs, systematic reviews and exhibit evidence based practice
PD10. GOOD PRACTICE AND LEADERSHIP SKILLS	
PD10.1	Able to identify limitations of self and seek help where necessary
PD10.2	Able to apply ethical principles in day today clinical practice
PD10.3	Able to uphold the values of integrity, honesty, and compassion
PD10.4	Able to exhibit diligence, competency and approachability
PD10.5	Apply principles of mindful practice to realize the vision of holistic care
PD10.6	Able to practice in an emotionally sustainable way
PD10.7	Able to reflect and understand personal losses and grief
PD10.8	Able to detach individual values and beliefs when dealing with patients with differing values and belief systems
PD10.9	Able to work in an environment of mutual respect
PD10.10	Able to care for self and the team

TEACHING AND LEARNING METHODS:-

A. Formal teaching

The post graduate trainees pursuing MD Palliative Medicine will undergo formal teaching at the departmental and institutional level.

Given below is the **Model Formal Teaching Schedule** that can be modified by the individual institution to meet their requirement.

Teaching programs held on all working days 8.30 AM to 9.30 AM

Day	Duration	Activity
Monday	1 hour	Journal Club
Tuesday	1 hour	Didactic Lecture
Wednesday	1 hour	Subject Seminar
Thursday	1 hour	Hospital (Grand Rounds/Clinical meeting)
Friday	1 hour	Clinical Case Presentation

Journal Club: The trainee will present a journal article, either an original article (RCT/Systematic review) or a short study along with a review article. The trainee is expected to present the article citing the relevance, background/context, study methods and statistical analysis, interpret results and discussion, summarize, present limitation and critically analyze the study methods and outcomes.

Didactic Lecture: Invited Lectures on basic sciences, biostatistics, research methodology, teaching methodology, from external faculty of specialties related to the subject, medical ethics and legal issues related to Palliative Medicine practice etc. are conducted once a week

Subject Seminar: The trainee will present a subject topic allocated after doing a comprehensive preparation, relevant literature search and presents the topic in detail covering all the relevant aspects, clinical applications and engages audience and answers questions.

Hospital Grand Rounds: The trainee will attend the Hospital Grand Rounds weekly, which involves presentations from various specialties, related to Palliative Medicine.

Clinical Case Presentation: The trainee will present a clinical case after performing thorough history and physical examination. Trainee will elicit physical and non-physical aspects in history, elicits all physical signs, formulates diagnosis/differential diagnosis and able to plan a comprehensive care plan for the patient.

B. ON THE RUN (BED SIDE) TEACHING

The postgraduate trainees pursing MD Palliative Medicine will carry out their clinical work under supervision of faculty/Senior Registrar. This involves around 2 hours of dedicated teaching ward rounds in the morning, and on the run teaching in outpatients, consultation liaison, home care, and hospice.

C. ADDITIONAL TEACHING/TRAINING

The postgraduate trainees pursing MD Palliative Medicine are expected to attend regular CMEs, Conferences, Workshops; Small group teaching organized by local/national/international institutes and required to be abreast with the current knowledge and recent advances in the field of Palliative Medicine.

D. CLINICAL POSTINGS

The postgraduate trainees pursing MD Palliative Medicine will undergo 3 years supervised specialist training in Palliative Medicine, which will comprises of 2 years of Core Training in the subject of Palliative Medicine and 1 year of Non Core Training in the related subjects. *The non core-training period will not exceed 1 year*. * Special training for a period of 02 years in India or abroad in this department.

Core Training – Year 1 and Year 3 – Description of Clinical Work in Palliative Medicine

Ward and Hospice	• Admit patient to the ward from outpatients, ED or community • Detailed medical assessment with a special focus on physical symptoms • Manage pain and other physical symptoms in a way that the patient has maximal comfort and dignity • Manage complications related to advanced progressive illness • Appropriate and relevant treatment of co-morbidities • Identify and manage palliative care emergencies • Undertake comprehensive psycho-social and family history and involve medical social worker in the care planning • Document a detailed care planning and involve MDT members as appropriate • Advance care planning and documentation of patient's goals of admission and care • Recognize and manage patient's psychological, emotional, spiritual and existential distress and seek help from the psychiatry team, medical social worker and chaplains. • Maintain good therapeutic relationships with patients and families; conduct regular family meetings and involve the patient and family in the ongoing care process. • Approach sensitively end of life care issues, discussions regarding resuscitation and facilitate the implementation of end of life care pathway. Offer bereavement support to the families along with the bereavement social worker.

Consultation Liaison	• Offer palliative care consultation to patients referred by oncology and non oncology sub-specialties • Participate in family meeting to facilitate smooth transition of care • Participate in discharge planning meeting to facilitate early home discharge and maintain continued care at home. • Participate in multidisciplinary team meetings • Liaise with psychiatry liaison registrar and specialty registrars.
Community	• Provide home based medical aspects of palliative care • Provide direction and supervision to community palliative care nurses and Royal District Nursing Services (RDNS). • Liaise with general practitioners and locum doctors in providing effective, round the clock continued pain and symptom relief • Facilitate end of life care at home, initiate end of life care pathway and provide relief of end of life symptoms and enable patients with advanced life limiting illness to die at home. • Organize acute or respite hospital admissions from the community as and when needed.
Outpatients	• Receives referral from other specialist departments • Triages patient referral and plans appropriate site of care (Home, Hospital, Hospice etc.) • Assess and manages physical symptoms and psychological issues • Provides a follow-up plan and maintains continuity of care • Provides optimal supply of medications needed for symptom control until next follow up • Liaises with the family physician for out of hours care and continued care in the community • Performs day care procedures like paracentesis, pleurocentesis and Nasogastric tube insertion • Liaise with the other related specialty for disease related and complication management Liaise with social work and ancillary services for patient's physical, financial and social rehabilitation.

Non-Core Training – Year 2 –

Description of Clinical Work Roles, Responsibilities and Learning Objectives

1. Work in the respective unit as a PG student in the respective medical specialty, subspecialty unit or department posted.
2. Clerk new cases and discuss with the respective departmental registrar or consultant and plan appropriate management.
3. Plan for investigations, rationally plan for investigations and able to interpret and apply results.
4. Participate in ward, emergency, ICU and on call duties.
5. Perform procedures in the respective department under supervision
6. Participate in the respective departmental education and research activities
7. Learn about application of Palliative Care in patients with advanced life limiting illness in respective specialty/department
8. Learn about role of disease management strategies and supportive care in patients with advanced life limiting illness under palliative care follow-up
9. Learn about provision of supportive care, managing comorbid and concurrent illness and learn about managing complications and emergencies.
10. Learn about specific rehabilitative and nursing procedures relevant to Palliative Medicine

Clinical Postings

<table>
<tr><td>Year 1</td><td>Year 2</td><td>Year 3</td></tr>
<tr><td>Core Training</td><td>Non Core Training</td><td>Core Training</td></tr>
<tr><td rowspan="12">Palliative Medicine – 12 Months (2 months each)
* Outpatient Posting
* Ward Posting
* Home Based Care Posting
* Consultation Liaison Posting
* Hospice Posting</td><td>3 Months General Medicine</td><td rowspan="12">Palliative Medicine – 12 Months
(2 months each)

* Outpatient Posting
* Ward Posting
* Home Based Care Posting
* Consultation Liaison Posting
* Hospice Posting</td></tr>
<tr><td>3 Months Medical Subspecialty
(6 Medical Subspecialty 15 days each)
[Gastroenterology, Neurology, Nephrology, Pulmonology, Cardiology, Endocrinology]</td></tr>
<tr><td>Pediatrics – 1 Month</td></tr>
<tr><td>Medical Oncology – 1 Month</td></tr>
<tr><td>Radiation Oncology – 1 Month</td></tr>
<tr><td>Surgical Oncology – 15 Days</td></tr>
<tr><td>Radiology - 15 Days</td></tr>
<tr><td>Public Health – 15 Days</td></tr>
<tr><td>Rehabilitation – 15 Days</td></tr>
<tr><td>Chronic Pain – 15 Days</td></tr>
<tr><td>Psychiatry – 15 Days</td></tr>
</table>

ASSESSMENT

FORMATIVE ASSESSMENT

Formative assessment should be continual and should assess medical knowledge, patient care, procedural & academic skills, interpersonal skills, professionalism, self directed learning and ability to practice in the system**.**

General Principles

Internal Assessment should be frequent, cover all domains of learning and used to provide feedback to improve learning; it should also cover professionalism and communication skills.

Quarterly assessment during the MD training should be based on:

1. Journal based / recent advances learning
2. Patient based /Laboratory or Skill based learning
3. Self directed learning and teaching
4. Departmental and interdepartmental learning activity
5. External and Outreach Activities / CMEs

The student is to be assessed periodically as per categories listed in postgraduate student appraisal form (Annexure I).

a. END OF POSTING ASSESSMENT

After completion of a fixed period of clinical training the supervisor assesses the trainee with regards to his/her personal attributes, work ethics, clinical work, interpersonal skills and communication. All aspects are individually scored and a net score is awarded. Trainees during their core training get evaluated every quarter and trainees during their non-core training get evaluated at the end of their clinical posting.

b. ACADEMIC PRESENTATION ASSESSMENT

The moderator will assess the trainees presenting journal article, subject seminar and clinical case and award individual and net score after the end of the presentation.

Note: Assessment of the Journal Article presentation by the moderator MUST be completed as soon as the presentation is over

Note: Assessment of the Journal Article presentation by the moderator must be completed as soon as the presentation is over.

Post Graduate students shall maintain a record (log) book of the work carried out by them. The record (log) books shall be checked and assessed periodically by the faculty members imparting the training.

c. THESIS PROGRESS ASSESSMENT

All trainees mandatorily should have a thesis guide and should meet with the thesis guide on regular intervals to check progress. Thesis guide will assess thesis progress at 12 months, 18 months, 24 months and 30 months and score the performance of the trainee with regards to thesis progress.

SUMMATIVE ASSESSMENT ie., assessment at the end of training, The summative examination would be carried out as per the Rules given in POSTGRADUATE MEDICAL EDUCATION REGULATIONS, 2000.

The summative assessment examination shall include two heads:

A. Theory examination.
B. Practical, Clinical examination and Viva-voce.

Theory examination and Practical/Clinical, Viva-voce shall be separate heads of passing.

Theory examination shall comprise of four papers. Passing percentage shall be cumulatively 50% with minimum of 40% marks in each theory paper.

Practical /Clinical examination consisting of at least one long case, three short cases and viva- voce. Passing percentage shall be 50%.

Passing shall be separate for each head and failing shall be common, meaning thereby that clearance at theory and failure at practical / clinical shall amount to failure at Summative examination and vice versa.

1. **Theory Examination**:

   There shall be four theory papers as follows:
   Paper 1: Basic Sciences as applied to Palliative Medicine
   Paper 2: Principles and Practice of Palliative Medicine (Cancer)
   Paper 3: Principles and Practice of Palliative Medicine (Non-Cancer)
   Paper 4: Recent advances in Palliative Medicine

2. **Clinical/Practical and Oral examination**:

   The practical examination should consist of the following and should be spread over two days, if the number of candidates appearing is more than five.

   * Exams can be conducted as an OSCE model.

   i. **One long case**: History taking, physical examination, and interpretation of clinical findings, differential diagnosis, investigations, prognosis and management.
   ii. **Three short cases**: focusing on Clinical Management and on Communication/Counseling skills.

3. **Oral examination**:

   Oral examination on drugs, instruments, radiological images, clinical images and charts.

Recommended reading:

Books (latest edition)

1. Oxford Textbook of Palliative Medicine
2. Oxford Textbook of Palliative Medicine for Children
3. Oxford Textbook of Palliative Nursing

A. Reference

1. Palliative Medicine
2. Textbook of Palliative Medicine and Supportive Care
3. Evidence Based Practice of Palliative Medicine
4. The Psychiatry of Palliative Medicine
5. Palliative Care Formulary (PCF)

B. Journals

3-5 International and 02 national journals (all indexed)

Annexure I

Postgraduate Student Appraisal Form

Name of the Department/Unit:

Name of the PG Student:

Period of Training: FROM……TO……

Sr. No.	PARTICULARS	Not Satisfactory	Satisfactory	More Than Satisfactory	Remarks
		1 2 3	4 5 6	7 8 9	
1.	Journal based / recent advances learning				
2.	Patient based /Laboratory or Skill based learning				
3.	Self directed learning and teaching				
4.	Departmental and interdepartmental learning activity				
5.	External and Outreach Activities / CMEs				
6.	Thesis / Research work				
7.	Log Book Maintenance				

Publications **Yes/ No**

Remarks* _____

_____

_____

***REMARKS: Any significant positive or negative attributes of a postgraduate student to be mentioned. For score less than 4 in any category, remediation must be suggested. Individual feedback to postgraduate student is strongly recommended.**

SIGNATURE OF ASSESSEE **SIGNATURE OF CONSULTANT** **SIGNATURE OF HOD**

MODEL PAPER

MD21301 **PAL.Med.-I**

MD Examination Month, Year
PALLIATIVE MEDICINE

Paper – I
Basic Sciences as Applied to Palliative Medicine
Time: Three Hours
Maximum Marks: 100

Attempt all questions
All the parts of one question should be answered at one place in sequential order.
Draw diagrams wherever necessary

Q.1 With a neat diagram describe the emesis pathway. Discuss the role of five key neurotransmitters of the emesis pathway 20

Q.2 Write on: 2x15 =30

(a) A 62-year-old man with metastatic non-small cell carcinoma presents with persistent vomiting and altered sensorium. His serum calcium was 14.5mg/dl. Discuss the pathophysiology of malignant hypercalcemia and receptor level mechanism of action of bisphosphonates & Denosumab

(b) A 74-year-old lady with metastatic breast cancer presents with acute onset weakness of both lower limbs. She was diagnosed to have spinal cord compression at the level of D 10. With a flowchart discuss the tissue and cellular level events from the onset of spinal cord compression up to the permanent neurological damage of the spinal cord and Discuss the cellular level mechanism of action of Dexamethasone in malignant spinal cord compression

Q.3: Write short notes: 5x10 =50

(a) Role of CYP2D6 pathway in cancer pain management
(b) 3DS technique for opioid rotation
(c) Mechanism of action of Morphine in Chronic Breathlessness Syndrome
(d) Role of creatinine clearance in opioid prescribing
(e) Syringe driver compatibility

MODEL PAPER

MD21302 **Pal.Med.-II**

MD Examination Month, Year
PALLIATIVE MEDICINE

Paper – II
Principles and Practice of Palliative Medicine (Cancer)

Time: Three Hours
Maximum Marks: 100

Attempt all questions
All the parts of one question should be answered at one place in sequential order.
Draw diagrams wherever necessary

Q. 1 A 45-year-old lady with metastatic cholangiocarcinoma is referred to palliative care for severe itching. Discuss the neuroanatomy of itch pathway and peripheral itch mediators and pathophysiology, clinical features and management of hepatogenic pruritus. 20

Q 2 Write on: 2x15 =30

(a) A 50-year-old lady with carcinoma cervix has recently received pelvic radiotherapy. She reports intractable lower abdomen pain, dysuria and haematuria. She is referred to palliative care for symptom management. Discuss the mechanisms of pain in radiotherapy associated cystitis and role of various urinary bladder specific analgesics used in radiotherapy associated cystitis

(b) A 69-year-old lady with metastatic colon cancer presents with severe constipation and pain abdomen. She is on 60 mg oral Morphine and receiving 10 mg of Bisacodyl at bedtime. A rectal examination was performed. Discuss pathophysiology of opioid induced constipation, role of rectal examination in a patient with constipation and management of refractory opioid induced constipation

Q.3 Write short notes: 5x10 =50

(a) Tools and questionnaires used to assess quality of dying
(b) Pre-emptive analgesia
(c) Braden scale
(d) Olanzapine in refractory vomiting
(e) DSM V criteria for delirium

MODEL PAPER

MD21303 **Pal.Med.-III**

MD Examination Month, Year
PALLIATIVE MEDICINE
Paper – III
Principles and Practice of Palliative Medicine (Non-Cancer)

Time: Three Hours
Maximum Marks: 100

Attempt all questions
All the parts of one question should be answered at one place in sequential order.
Draw diagrams wherever necessary

Q.1 The Kidney Disease: Improving Global Outcomes (KDIGO) have recommended guidelines for providing supportive care in CKD. 20

(a) Discuss KDIGO definition of "comprehensive conservative care" in CKD (5 marks)
(b) Discuss KDIGO recommendations for supportive care in CKD patients (5 marks)
(c) Discuss I-POS Renal (5 marks)

Q2. Write on: 2x15 =30

(a) In 2018, the WHO published guidelines on integrating palliative care in humanitarian emergencies and crises. Discuss palliative care triage categories of humanitarian emergencies and crises, types of suffering seen in humanitarian emergencies and crises and WHO essential package of palliative care for humanitarian emergencies and crises

(b) A 34-year-old lady with carcinoma of cervix and seropositive for HIV is not accessing palliative care due to stigma associated with her illness. Define stigma and discuss the classification of stigma, palliative care stigma and negative stereotypes associated with the term palliative care and evidence to suggest that stigma is a barrier for palliative care outcomes

Q3: Write short notes: 5x10 =50

(a) Stage D heart failure
(b) Dignity therapy
(c) Existential suffering
(d) REMAP framework for discussing goals of care
(e) Breathing-Thinking-Functioning model in chronic breathlessness

MODEL PAPER

MD21304 **Pal.Med.-IV**

MD Examination Month, Year
PALLIATIVE MEDICINE
Paper – IV
Recent advances in Palliative Medicine

Time: Three Hours
Maximum Marks: 100

Attempt all questions
All the parts of one question should be answered at one place in sequential order.
Draw diagrams wherever necessary

Q.1 A researcher would like to develop a complex palliative care intervention. Discuss in detail the five steps of developing a complex intervention as described by the Medical Research Council (MRC) UK. 20

Q2. Write on: 2x15 =30

(a) A researcher would like to conduct a research on quality of dying. The researcher would like to recruit patients and their families receiving end of life care at a hospice. Challenges in research recruitment in end of life care, Ethical considerations of research and MORE care statement on best methods to research in end of life care

(b) In 2019, the American Society of Clinical Oncology (ASCO) updated the clinical practice guidelines for venous thromboembolism prophylaxis and treatment. Discuss the eight recommendations made regarding the best method for treatment of patients with cancer associated venous thromboembolism

Q3: Write short notes: 5x10 =50

(a) Mathura Declaration
(b) Aruna Shaunbag case and its contributions to us
(c) Terminal Sedation and its legality
(d) Palliative Care is only for cancer patients. True / False? Discuss
(e) Critical appraisal of qualitative studies