Standard Operating Procedure for Indian Diploma in Critical Care Nursing (IDCCN)

Objective: The purpose of the course is to train nurses to:
Provide quality care to critically ill patients.
Teach nurses, allied health professionals and family members in areas related to critical care nursing.
Conduct research in areas of critical care nursing.

Course Description
This course is designed to assist students in developing expertise and knowledge in the field of Critical care Nursing. It will help students to develop advanced skills for nursing intervention in caring for critically ill patients. Duration of the course is for one year.

Expected Skill & Knowledge: At the end of the course the students will be able to
1. Appreciate trends and issues related to Critical Care Nursing
2. Describe the epidemiology, etiology, pathophysiology and diagnostic assessment of critically ill patients
3. Describe the various drugs used in critical care by nurses.
4. Demonstrate advance skills/competence in managing critically ill patients including Basic Cardiac Life Support.
6. Demonstrate skill in handling various equipment used in ICU.
7. Provide comprehensive care to critically ill patients
8. Appreciate team work & coordinate activities related to patient care.
9. Practice infection control measures.
10. Assess and manage pain.
11. Identify complications & take appropriate measures.
12. Assist patients and their family to cope with emotional distress, grief and anxiety
14. Assist in various diagnostic, therapeutic and surgical bed side procedures
15. Teach and supervise nurses and allied health workers.

Eligibility Criteria for IDCCN Institutions:

1. The institution should be having an ongoing IDCCM course.
2. Institution without ongoing IDCCM course can also apply for IDCCN
3. Institutions should have two teachers: At least one full time doctor faculty and one nursing teacher or two full time doctor teachers, who are eligible, to be considered as teachers, as per the criteria given below.
4. Two prospective teachers must apply along with the institute for recognition of IDCCN training.
5. The person taking responsibility to run the course will be designated as Course Director and a teacher for IDCCN course conducted by ISCCM. He can nominate a Course Coordinator who would be responsible for implementation of the training and should preferably be a Nurse Tutor.
6. For IDCCN alone as standalone course, at least 50 beds and 12 beds in ICU should be available. The institution should fulfill the infrastructure and teachers’ criteria laid by ISCCM. Institution should have functional ICU for two years.
7. Higher authority of the institution must give following undertaking in addition to having two eligible teachers that
   - In case a teacher leaves the institute they will continue to provide training to the trainee
   - All facilities in the institute will be provided to the trainee nurses during his period of training in the institute.

Eligibility criteria for teacher:
1. The teacher should have formal qualification in Intensive Care which can be any one or more of them: FICCM, IFCCM, FNB - Critical Care, DM - Critical Care or equivalent
qualification from Australia (FCICM), USA (AB Critical Care), U.K or Canada without additional experience.

2. Teacher with a post graduate, MCI recognised qualification- MD, MS, DNB (Medicine, Surgery, Pulmonary medicine, Anaesthesia, Paediatrics, Emergency medicine) with at least 2 years of working experience in critical care medicine post MD/MS/DNB qualification, in a recognized major hospital and has also competed IDCCM with 2 years of experience post IDCCM can be considered as an IDCCN teacher.

3. Teachers with a MCI recognised Post Graduate Diploma-DA (Diploma in Anaesthesia) or DTCD (Diploma in TB and Chest Diseases), with at least 5 years of experience in critical care medicine (after achieving MCI recognised Post Graduate Diploma), in a recognized major hospital is also eligible, provided had cleared IDCCM with 2 years post IDCCM experience.

4. BSC post basic in critical care, MSc Critical care, PhD Critical care approved by nursing council of India can become IDCCN teacher. Nurses with only IDCCN certificate must have 5 years of experience in a recognized major hospital after IDCCN to become eligible for IDCCN nursing teacher.

5. Other points:
   - Teachers’ application will be considered along with the Institution’s application. Teachers’ application in isolation independent of Institute’s accreditation is not allowed (except for additional teacher from an already accredited institute)
   - Teacher should be working full time in an institute to be considered as a teacher for the IDCCN course.
   - Teachers must devote at least 50% of their professional time in Critical Care Medicine
   - Teacher should be a Life Member of ISCCM
   - After a teacher has left an institute he cannot take a new student in another institute for one year from the time of leaving the previous institute.

**Number of candidates:**
- Doctor Teacher to candidate ratio of **1:4 for IDCCN.** Candidates will not be enrolled against nursing teacher.
- Enrolled IDCCN candidates can be twice the number of approved IDCCM candidates.
The number of candidates to be enrolled can vary from 4 to 16 depending upon the approved IDCCM seats in that Institution.

Criteria for IDCCN seat and increase in seat:
- Teacher to candidate ratio of **1:4 for IDCCN** must be maintained while contemplating any increase in seat.
- At least two IDCCN candidates must have passed from an Institute in last two years to apply for increase in seats.
- For every one seat increase, the institution should have 6 more ICU beds in addition to the existing 12 beds with two additional ventilators.

How to apply for accreditation:
Application form duly filled and countersigned by Course Director should be sent to the General Secretary of ISCCM along with a Bank Draft of Rs 5000.00 favouring **Indian Society of Critical Care Medicine - College** payable at Mumbai. Out of this Rs 1500/- will be non-refundable and 3500/- will be refunded, if suitability of institution for undergoing inspection is not approved by ICCM/ISCCM, based on the check list.

Application for hospital recognition & teacher recognition are to be filled online and the required fee has to be paid online, through the ISCCM website [www.isccm.org](http://www.isccm.org).

Inspection and Approval
- The institute and teachers applications will be scrutinized by the college office and the Accreditation Secretary.
- If found eligible, Accreditation secretary will appoint 1 inspectors (If IDCCM course is not ongoing) who will make an on-site inspection visit of the institute. For institution with ongoing IDCCM course additional inspection is not needed.
- The travel & stay of the inspectors shall be looked after by the Institute desirous of recognition.
- The inspection report will be tabled at the next College Board meeting and the decision of College Board will be ratified by Executive Committee.
- Once recognition is granted, institutes may start taking candidates from the same academic year if the process is completed before the last date of registration to the courses, or the next academic session if the process is completed later.
• In case institutes do not meet the criteria, they will have to reapply after fulfilling all criteria, which will be followed by a re-inspection.
• The decision of the ISCCM executive committee will be final and binding in all respects.

Eligibility Criteria for reaccreditation:
• Institutes need to get re-accredited every three years by submitting a formal application
• There should be at least one IDCCN candidate passed out in last three years for Institute to be re-accredited.
• It is expected there is at least one IDCCN candidate recruited in last three years for an Institute to be re-accredited.
• If there is any serious concern expressed on any Institute by any of their trainees in three years, re-consideration may be done by the College for re-accreditation.
• If an Institute fails to apply for re-accreditation in stipulated time frame, recognition of the Institute for IDCCN training subsequently shall stand cancelled. Institute will have to submit a fresh application for accreditation.
• From 2020 an institute will be reaccredited only if they have two eligible teachers (preferably One doctor and one nursing) . If any teacher leaves the institute, the institution must appoint a new teacher within one year from the time the previous teacher has left the institute.

Conduction of IDCCN Examination: On successful completion of training, examination will be conducted.
1. Examination will be conducted twice in a year (February & August)
2. If only one center is available in the town/city, examination will be conducted in that institute. If multiple centers are available in the town/city, the examination center will be selected from where maximum number of candidates are appearing for the examination. Candidates from other centers can appear for examination in the selected center.
3. One doctor examiner and one nursing examiner preferably will be selected from the center where examination is being conducted. One external (Chief examiner) will be selected from any other center from the city (if multiple centers are available) or from nearby center from other city / or another examiner from same center (if only one center is available in the city).
4. Examination will be based on Theory (MCQ) and Viva.
5. The Nursing Secretary will be responsible for forming the MCQ for the theory examination.
6. Examination papers will be sent to chief examiner on the day of examination from ISCCM office, maintaining confidentiality.
7. Examiners will be selected from the records maintained in ISCCM office. Examiners will be informed by Nursing secretary after taking their consent to conduct the examination.
8. ISCCM office will do necessary correspondence for the same.
9. The examiner should be a teacher for more than 2 years for IDCCM/IDCCN.
10. At least one of his IDCCM/IDCCN students must have passed.
11. One teacher can become examiner for a maximum of 2 exams per year.
12. The result will be sent to ISCCM office by the chief examiner. Compilation will be done at ISCCM office before final declaration of result.
Scoring Sheet for the Examination:

<table>
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<tr>
<th>No.</th>
<th>Name of Candidate</th>
<th>MCQ Marks Total 100</th>
<th>Table 1 Total Marks 20</th>
<th>Table 2 Total Marks 20</th>
<th>Table 3 Total Marks 20</th>
<th>Grand Viva Total Marks 40</th>
<th>Comments</th>
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Rules:
1. 50% score is mandatory for MCQ (Theory) examination
2. Candidates can appear for practical after clearing theory
3. 50% mark collectively in 3 tables is mandatory (ie 30 out of total 60)
4. 50% mark in grand viva is mandatory
5. Candidates fulfilling above criteria can be declared pass & mention the same in comments column
6. For candidates not clearing the exam specific suggestions can be given in comments column after mention fail.

External Examiner: Name & Signature
Examiners: 1. Name & Signature 2. Name & Signature

Course Content for IDCCN

I. Introduction to Critical Care Nursing
   Historical review- Progressive patient care (PPC)
   Review of anatomy and physiology of vital organs, fluid and electrolyte balance
   Concepts of critical care nursing
   Principles and Scope of critical care nursing
   Critical care unit set up including equipments supplies, use and care of various type of monitors

PREPARED BY: Dr D P Samaddar
APPROVED BY: Dr Yatin Mehta

DESIGNATION: Secretary Nursing ISCCM
DESIGNATION: Chancellor /President, ISCCM

SIGNATURE
SIGNATURE

DATE
DATE
& ventilators Flow sheets

2. Concept of Holistic care applied to critical care nursing practice
Impact of critical care environment on patients:
- Risk factors, Assessment of patients, Critical care psychosis,
The dynamics of healing in critical care unit:
- therapeutic touch,
Relaxation, Music therapy, Guided Imagery, acupressure
Stress and burnout syndrome among health team members

3. Review of Drugs/Fluids Pharmacokinetics
Analgesics/Anti inflammatory agents
Antibiotics, antiseptics
Drug reaction & toxicity
Drugs used in critical care unit (inclusive of inotropes, vasopressors and life saving drugs)
Drugs used in various body systems
IV fluids and electrolytes
Blood and blood components
Principles of drug administration, role of nurses and care of drugs

4. Pain Management
Pain & Sedation in Critically ill patients
pain management-pharmacological and non-pharmacological

5. Infection control in intensive care unit
Nosocomial infection in intensive care unit; Disinfection, Sterilization, Standard safety measures, Needle Stick Injury,
Prophylaxis for staff Bio Medical Waste Management

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6. Gastrointestinal System
Medical, Surgical and Nursing management of:
Acute Gastrointestinal Bleeding, Abdominal injury,
Hepatic Disorders:- Fulminant hepatic failure, Hepatic Encephalopathy,
Acute Pancreatitis, Acute intestinal obstruction, perforation Peritonitis

7. Renal System
Medical, Surgical and Nursing management of:- Acute Renal Failure, Chronic Renal Failure,
Management Modalities:Renal Replacement Therapy

8. Nervous System
Medical, Surgical and Nursing management of:-Common Neurological Disorders:-
Cerebrovascular disease,
Cerebrovascular accident,
Seizure disorders,
GuilleinBarre-Syndrome, Myasthenia Gravis,
Coma, Persistent vegetative state,
Head injury, Spinal Cord injury

9. Endocrine System
Medical, Surgical and Nursing Management of :-
Hypoglycemia, Diabetic Ketoacidosis,
Insulin therapy

10. Management of other Emergency Conditions/ Trauma
Mechanism of injury, Cervical Spine/Thoracic injuries, Abdominal injuries, pelvic fractures, complications of trauma
Shock: Shock syndrome, Hypovolemic, Cardiogenic, Anaphylactic, Neurogenic and Septic shock Systemic inflammatory Response: The inflammatory response, Multiple organ dysfunction syndrome Drug Overdose and Poisoning,
11. Cardiovascular emergencies
Principles of Nursing in caring for patient’s with Cardiovascular disorders Assessment:

12. Respiratory System
Acid-base balance Assesment: History & Physical Examination Pulse Oximetry, End - Tidal Carbon Dioxide, Arterial blood gas studies, chest radiography, pulmonary Angiography, Bronchoscopy Medical, Surgical and Nursing management of Common pulmonary disorders: - Pneumonia, Status asthmaticus, Interstitial drug disease, Pleural effusion, Chronic obstructive pulmonary disease, Pulmonary tuberculosis, Pulmonary edema, Pulmonary embolism, Acute respiratory distress syndrome (ARDS), Chest Trauma - Haemothorax, Pneumothorax Management Modalities: - Airway Management Ventilatory Management: - Invasive, non-invasive, long term mechanical ventilations Bronchial Hygiene: - Nebulization, deep breathing exercise, chest physiotherapy, postural drainage, Inter Costal Drainage

13. Burns
Clinical types, classification, assessment, diagnosis, prognosis Management: Medical, Surgical & Nursing management of burns Fluid and electrolyte therapy – calculation of fluids and its administration Pain management

14. Obstetrical Emergencies

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Medical, Surgical and Nursing management of: Antepartum haemorrhage, Preeclampsia, eclampsia, Post partum haemorrhage, Periperal sepsis, Obstetrical shock

15. Neonatal Paediatric emergencies
Medical, surgical and Nursing management of Neonatal emergencies

16. Legal and ethical issues in critical care-Nurse’s role
Brain death & Organ donation & Counselling Do Not Resuscitate (DNR)

17. Quality assurance
Standards, Protocols, Policies, Procedures Infection control; Standard safety measures Nursing audit Staffing, Design of ICU/CCU

ESSENTIAL CRITICAL CARE NURSING SKILLS

I. Procedures Observed
1. CT Scan
2. MRI
3. EEG
4. Hemodialysis
5. Endoscopic Retrograde cholangioPancreaticogram (ERCP)
6. Heart/ Neuro/GL/ Renal Surgeries

II. Procedures Assisted
1. Advanced life support system
2. Basic cardiac life support
3. Arterial line/arterial pressure monitoring/blood taking
4. Arterial blood gas
5. ECG recording
6. Blood transfusion
7. IV cannulation therapy
8. Arterial Catheterization
9. Chest tube insertion
10. Endotracheal intubations
11. Ventilation
12. Insertion of central line/cvp line
13. Connecting lines for dialysis

### III. Procedure Performed
1. Airway management: airway adjuncts, Oxygen therapy, Non Invasive Ventilation/CPAP ET Suction, Care of tracheostomy Endotracheal extubation
2. Cardiopulmonary resuscitation, Basic cardiac life support,
3. Monitoring of critically ill patients – clinically with monitors, capillary refill time (CRT) assessment of jaundice, ECG.
4. Gastric lavage
5. Assessment of critically ill patients Identification & assessment of risk factors for Pressure Sores, Glasgow coma scale, Arterial pressure monitoring, cardiac output/pulmonary artery pressure monitoring, detection of life threatening arrhythmias
6. Admission & discharge of critically ill patients
8. Assessment of blood sugar levels periodically & administering insulin.
12. Setting, use & maintenance of basic equipment, ventilator, O2 analyzer, monitoring equipment, transducers, defibrillator, infusion & syringe pumps.
COMPETENCIES
A Record of competencies will be issued by the recognised teacher/guide at the end of training. The following are the competencies that shall be assessed and signed after the end of each posting.

1. Recognition, assessment and stabilization of a critically ill patient – structured and timely approach
2. Manages cardiopulmonary resuscitation
3. Manages the patient post-resuscitation
4. Triages and prioritizes patients appropriately, including timely admission to ICU
5. Obtain a history and performs an accurate clinical examination
6. Undertakes timely and appropriate investigations
7. Describes indications for Endotracheal Intubation
8. Performs ECG and interprets the results
9. Recognizes and manages electrolyte, glucose and acid-base disturbances
10. Chest x-rays - Liaises with radiologists to organize and interpret clinical imaging
11. Monitors and responds to trends in physiological variables
12. Co-ordinates and provides nutritional assessment and support