



Prince Sultan Military Medical City

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SCOPE OF SERVICE

Department: Intensive Care Services (ICS)	SOS No. 2-4-1005-04-004	Version: 03
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Unit Description	Department of Intensive Care Services
No. of Beds	93 Closed Beds and 39-Shared Beds. Total 132.
Hours of Operation	24 hours a day, 7 days a week.
Ages of patients served	Adult- 14 years and above

1. Scope of Service

Department of Intensive Care Services (ICS) consists of General Intensive Care Unit 1 (GICU-1) – 20 beds, General Intensive Care Unit 2 (GICU-2) -25 beds, Trauma & Neurosurgical ICU – 4 beds, Procedure Room– 1 bed, Emergency Department ICU (ED-ICU) – 8 beds, , Gynae & Obstetric ICU – 2 beds, Burn ICU (BICU) – 5 beds, Stepdown High Dependency Unit (SHDU) – 8 beds, Surgical & Fast Track ICU (SICU) – 15 beds, Royal ICU -5. The total bed strength of closed ICS is **93**. Rapid Response Team (RRT) – 14 beds, Chronic Ventilation Unit (CVU) – 20 beds, MedEvac Team – 5. Total shared beds are **39**. A grand total of **132**.

It provides intensive care management to the critically ill adult patients above the age of 14 years. On an average, it provides services to 475 to 525 patients per month and 5,569 patients annually.

2. Frequent Procedures/Services/Functions

2.1 ICS consists of multi-disciplinary units which include:

Unit	Services
1. GICU 1	It is located on the 1 st floor of building 5 & consists of 20 beds. It caters the needs of critically ill medical & infected surgical patients who required hemodynamic monitoring, ventilatory support or other specialized support like renal replacement therapy, MARS, ECMO etc. It's a closed unit.
2. Trauma & Neurosurgical ICU	Situated on the 1 st floor of building 5. It has 4 beds. It is designated to look after the fresh trauma patients & Post-operative Neurosurgical & post Neuro-intervention patients, who require hemodynamic monitoring, ventilatory & neurological support & monitoring. It's a closed unit.
3. GICU 2	It is located on the 3 rd floor of building 4 & consists of 25 beds. It caters the needs of critically ill medical & specialized surgical patients like renal and liver transplant, who required hemodynamic monitoring, ventilatory support or other specialized support like renal replacement therapy, ECMO etc. It's a closed unit.



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4. ED-ICU	It is located in Emergency Department Building 9 Fifth Floor. It has 8 beds. Critically ill patients with unstable physiology are looked after in this unit. It provides all the services of an ICU. Within 3 to 5 days they are admitted to GICU 1 or 2. It's a closed unit.
5. Burn ICU	It is on the 3 rd floor of building 2. It has 5 beds. It provides services to burn patients who need hemodynamic & ventilatory support & aggressive fluid management. It's a closed unit.
6. Gynae & Obstetric ICU	This 2 bedded ICU located on the 5 th floor of building 3. High-risk obstetric & postoperative gynae patients are admitted in this unit. It's a closed unit.
7. Surgical & Fast Track ICU	It is situated on two locations. 1 st floor of building 2. It has 9 beds & a King's suite. High risk surgical patients are admitted in this unit postoperatively. VIP patients who need intensive care are also admitted here. Another 5 beds are located in Building 5 1 st floor. It looks after the postoperative high risk surgical cases. These patients require frequent hemodynamic monitoring, organ support & nursing care. It's a closed unit.
8. Total Parenteral Nutrition (TPN)	Those patients, who cannot be fed through enteral route, need TPN. This service identifies these patients & writes the prescription for TPN. It also follows up these patients till they are on parenteral nutrition.
9. MedEvac ICU Team	It is team of highly trained physicians & health care personals who transport critically ill patients to and from the hospital.
10. Rapid Response Team (RRT)	ICU Physicians, ICU Nurses & Respiratory Therapists constitute this team. They will manage patients who show sign of critical illness in the hospital wards with the possibility of admission to ICU. They also triage the patient according to ICU admission & discharge policy.
11. Chronic Ventilation Unit (CVU)	This unit looks after the chronic vented patients in all over the PSMMC. They are responsible for weaning of these patients from ventilator and advising the MRP in daily management of these chronic patients. It's NOT a closed unit.
12. Royal ICU Team	This team covers the VVIP patients in different palaces and in 1R & 2R
13. Stepdown Dependency Unit (SHDU)	It is situated in two locations. An 8 bedded Stepdown High Dependency Unit located on 3 rd Floor of Building 5. It provides non-invasive hemodynamic monitoring and nursing care to acutely ill patients who are expected to improve within 3 to 5 days.

2.2 The provision of care in ICS provides specialized monitoring and surveillance of patients using advance technology, which is available in our unit 24 hours a day. These include:



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- 2.2.1 Invasive & minimally invasive hemodynamic monitoring. e.g. Arterial, CVP, PA & Cardiac Output monitoring, PiCO, Vigelio, Lidco & NICO etc.
- 2.2.2 Continuous cardiac monitoring with dysrhythmia interpretation.
- 2.2.3 Arterial & central venous assess, for monitoring of fluid status and medication management.

3. Continuous Respiratory Monitoring.

3.1 Therapeutic modalities, which are provided in our ICS are:

- 3.1.1 Chest tube insertion & maintenance.
- 3.1.2 Ventilatory support (Both invasive & Non-invasive)
- 3.1.3 Temporary cardiac pacing.
- 3.1.4 Renal replacement therapy. This includes peritoneal dialysis, Haemodialysis & Continuous renal replacement therapy.
- 3.1.5 Management of Intra-aortic balloon pump.
- 3.1.6 Insertion of line, initiation & maintenance of ECMO.
- 3.1.7 MARS (Liver dialysis)
- 3.1.8 Emergency resuscitation including defibrillation / cardio version.
- 3.1.9 Medication delivery & pharmacological intervention including intravenous vasoactive and antiarrhythmic drugs, anticoagulation & immunosuppressant therapy.
- 3.1.10 Blood & blood products administration.
- 3.1.11 Management of artificial airway & mechanically ventilated patients.
- 3.1.12 Oxygen therapy & pulse oximetry.
- 3.1.13 Continuous nursing assessment & evaluation of patient's physical and emotional needs & corresponding therapeutic intervention.
- 3.1.14 Skin integrity maintenance.
- 3.1.15 Nutritional support (Enteral & TPN)
- 3.1.16 Psychosocial & emotional support for patients & families.
- 3.1.17 Infection control & patient safety.
- 3.1.18 Hypothermia therapy.



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3.1.19 Intracranial monitoring for pressure & oxygenation.

3.1.20 Polymyxin Hemoperfusion Therapy.

4. Criteria for admission to the service (Who is eligible to the service?)

Adult patients who are critically ill with unstable physiology can be admitted to ICS. (See ICS Admission & Discharge Policies of different Units)

5. Staff

The ICS has the following staff:

Sr. No.	Position	Qualification	Number of Staff
1.	Critical Care Physician	Critical Care Physician (CPP) or Intensivist are usually certified in a medical specialty such as internal medicine, surgery or anaesthesia and also received extra education & training in critical care. Intensivist is normally assigned to the ICU on full time basis. They work with other critical care team members to provide on-going & continuous care to all patients in ICU.	33
2.	Critical Care Nurse	Critical care nurses are the registered nurses, who have specialized education & training in critical care nursing. Critical care nurses provide high level of skilled nursing for continuous & total patient care as members of ICU team.	272
3.	Respiratory Therapist	Respiratory therapists (RT) are licensed professionals who provide technical expertise with ventilatory care & work with the critical care team to monitor & adjust ventilators & other respiratory care including aspects of chest physiotherapy as needed.	89
4.	Clinical Pharmacist	Clinical pharmacists are the registered pharmacists who have extensive training and knowledge of the effects of drugs and their interaction among critically ill patients. They give valuable advice about choice of drugs and help minimize complication related to their use. Especially with patients of multi organ dysfunction. They also play	3



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		a valuable role in cost containment and avoidance of inappropriate therapy.	
5.	Critical Care Nutritionist	Registered nutritionists who along with the critical care team assess the nutritional requirement of the patients and suggest enteral & parenteral therapy.	1
6.	Physiotherapist	Licensed professional who is trained in physical therapy of the critically ill patients. In conjunction with the critical care team, he provides physical therapy to the ICU patients.	2
7.	Social Worker	He looks after the social & emotional needs of the patients and their families.	6
8.	Ward Clerk	He / She is responsible for admission & discharge and filing the computer system. Also maintain the patient file hard copy.	1
9.	Personal Assistant / Office Secretary	He / She looks after the daily paper work of the department & helps the Director in communication with the rest of the organisation. He / She also keeps the record of all the letters, memos and minutes of the meetings held in the department.	3

6. How are In-Services/Continuing Education Programs provided to maintain staff competency?

It is provided in the following way:

- 6.1 Daily morning meetings with five minutes presentation by the fellows.
- 6.2 Weekly lectures and discussions.
- 6.3 Weekly grand rounds with the Infection Control team.
- 6.4 Daily patient's rounds & discussions.
- 6.5 Monthly journal club meetings.
- 6.6 Monthly ICU club meetings
- 6.7 In service of new equipment.
- 6.8 Once a month Mortality & Morbidity meetings.
- 6.9 Arranging Research day twice a year.
- 6.10 Two years Critical Care Fellowship training program.
- 6.11 Critical Care Nursing Diploma.
- 6.12 Respiratory Therapy Diploma.
- 6.13 Offer ICU rotation to rotating residents & fellows.



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7. Method to communicate to other department

We communicate with other department in the following way:

- 7.1 Monthly departmental meetings with available minutes.
- 7.2 Memos.
- 7.3 Patient care conferences.
- 7.4 Hospital intranet.
- 7.5 Collaborative hospital committee meetings.
- 7.6 Written policies procedures & protocols.

8. Plan to improve Quality of the Service

Our plans to improve our quality of service are:

- 8.1 Review & revise standards of patient care & clinical practice.
- 8.2 Ensure staff competency in required competency testing.
- 8.3 Offer educational programs to increase staff's knowledge and skill.
- 8.4 Implement infection control surveillance for continuous patient care and safety.
- 8.5 Implement RABET (CERNER) for better record keeping and continuous patient care and safety.
- 8.6 To implement and extend patient scoring system so that we can compare the severity of illness in our patients with other bench marks.
- 8.7 To promote and encourage research program in ICS in collaboration with other hospitals.
- 8.8 Staff participation in hospital wide and unit-based performance improvement projects.

9. Reporting

Our department is reporting to the Medical Administration about our activities once weekly and CQI & PS once monthly. We are publishing our Annual reports.



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