

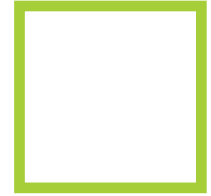


# A Stepwise Quality Improvement Checklist for Federal Tertiary Hospitals

## **INTENSIVE CARE UNIT (ICU)**

*An Assessment Tool to Strengthen the  
Management and Quality of Intensive Care Services  
Provided by Federal Tertiary Hospitals*





## INTRODUCTION

### Context

#### *Continuous Quality and Safety Improvement in Federal Tertiary Hospital*

#### **Tertiary Hospital Intensive Care Units and Services**

An intensive care unit (ICU), also known as an intensive therapy unit or intensive treatment unit (ITU) or critical care unit (CCU), is one of the most critically functioning operational environments in a hospital that provides intensive treatment medicine.

ICUs are fairly large sterile areas with a high concentration of specialised, technical and monitoring equipment needed to care for critically ill patients, and staffed by highly trained physician and nurses who specialize in caring for critically ill patients.

The unit cater to patients with severe or life-threatening illnesses and injuries, which require constant care, strict infection control, close supervision from life support equipment and medication in order to ensure normal bodily functions.

There must be defined policies for admission, referral and discharge of patients, which should be made available to all staff.

## Objectives of this Checklist

This quality assessment checklist will provide **direction, support, and accountability framework** while focussing on individuals, systems, management of resources and self-governance. It will build corporate accountability for clinical performance into the ICU service management model and develop a corporate culture in which quality improvement becomes a shared enterprise through shared learning and information. It will also provide strategic opportunities to diagnose and repair broken processes.

Frequent, accurate assessment and timely feedback will support action plans to implement systems that are lacking and revive those that are not functioning effectively.

This checklist therefore represents a clinical governance assessment tool to determine:

- 1) The quality of intensive care services.
- 2) The quality of patient safety strategies put in place in the ICU.
- 3) The quality and competency level of clinical and non-clinical support services in the ICU and their impact on patient outcomes.
- 4) The level of process capabilities
- 5) Identify areas for improvement.





## Assessment Scoring

The contents of this checklist have been awarded point values based on their relative importance. Responses to all questions must be either **“Yes” or “No” or “Not Applicable” (NA)**.

The checklist has considerable overlap and expanded to include important continuous quality tools.

### NOTE:

- *Only responses marked yes should be given the allotted points. All the required answers to a particular question must be present before you can indicate a “yes” for any given checklist question and then award the corresponding allotted points.*
- *It is often not necessary to ask all the checklist questions verbatim. An experienced auditor can often learn to answer multiple checklist questions through open-ended questions with the key or designated staff contact.*

This checklist is divided into different aspects of Quality Management System that the department is required to develop and implement regularly as listed below;

<b>Assessment Score Sheet</b>			
<b>Sections</b>		<b>Total Allotted Scores</b>	<b>Assessed Scores</b>
4.0	Staffing Summary	12	
4.1	Facility and Safety	29	
4.2	Organisation and Management	32	
4.3	Infection Control	26	
4.4	Patients/Client Engagement and Communication	13	
4.5	Equipment	52	
4.6	Occurrence/Incidence Management	11	
4.7	Waste Management	10	
<b>Total Scores</b>		<b>173</b>	

### Assessment Score Sheet

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<i>Total Scores</i>		<i>173</i>			



## General Information

Date of Assessment:	
Name(s) and Affiliation(s) of Assessor(s):	
Name of Federal Tertiary Hospital:	
Address:	
State:	
Name of CMD/MD:	Telephone/E-mail (CMD/MD):
ICU Telephone:	Email
Head of ICU:	Telephone (Head of ICU)
Annual number of patients seen:	
Internal referrals	
External referrals:	
Bounce-backs	
Mortality per 100,000:	
Nosocomial Infections:	

## 4.0 Staffing Summary

Profession	Number of Full Time Equivalents (FTEs)	Adequate for Facility Operations			Allotted Scores	Assessed Scores
		Yes	No	Insufficient Data		
ICU Specialist consultants					3	
Senior registered doctors - BLS/ALS certified					3	
Junior registered doctors- BLS/ALS certified					3	
ICU Specialist Nurse BLS certified					3	
<b>Subtotal</b>					<b>12</b>	

For each item, please circle either Yes, No, or Not Applicable (N/A). All elements of the question must be satisfactorily present to indicate "yes" and award credit. Provide explanation or further comments for each "no" or "n/a" response.

	YES	NO	N/A	Comments	Allotted Scores	Scores Assessed
<b>4.1 FACILITY &amp; SAFETY</b>						
Is the ICU located away from human traffic flow area within the hospital?	YES	NO	N/A		2	
Does the ICU have easy access to the emergency department, operating theatre and radiology units?	YES	NO	N/A		1	
<b>Standard:</b> <i>The ICU should be a separate unit within the hospital with access to key relevant departments.</i>						
Is the ICU layout appropriate for:						
Equipments	YES	NO	N/A		1	
Working Space	YES	NO	N/A		1	
Storage	YES	NO	N/A		1	
Waiting areas for relative	YES	NO	N/A		1	
Staff rest rooms	YES	NO	N/A		1	
<b>Standard:</b> <i>Adequate space must be allowed for patient monitoring resuscitation equipment and medical storage areas (including a refrigerator), e.g. monitors, ventilators, infusion pumps, dialysis equipment, disposables, fluids, drip stands, trolleys, blood warmer, suction apparatus, linen, large items of special equipment, communication systems, computers and stationery.</i>						
Is the alternative power supply (backup) attached to an automatic switch over?	YES	NO	N/A		2	
<b>Standard:</b> <i>There must be an uninterrupted electricity supply in the ICU ideally, the alternative power supply (backup) should have an automatic change overswitch.</i>						
Is there provision for emergency lights in the ICU?	YES	NO	N/A		2	
Is there adequate air conditioning in the unit?	YES	NO	N/A		2	
<b>Standard:</b> <i>The unit should have appropriate air conditioning which allows control of temperature, humidity and air exchange</i>						
Is there a drug preparation area-for clean rapid drug and fluid preparation?	YES	NO	N/A		2	
Is the oxygen supply available through fixed pipes and via cylinders?	YES	NO	N/A		3	
Is there an oxygen supply failure alarm available and fitted to the ventilators?	YES	NO	N/A			
<b>Standard:</b> <i>An oxygen analyzer must be available to measure the oxygen concentration delivered by ventilators or breathing systems</i>						
Are these alarms for breathing system disconnection or ventilator failure available on the ventilators	YES	NO	N/A		2	
<b>Standard:</b> <i>When an automatic ventilator is in use, a device capable of warning promptly of breathing system disconnection or ventilator failure must be in continual operation.</i>						
Are monitors available for ICU?	YES	NO	N/A		3	
<b>Standard:</b> <i>Anaesthetic machines are to be available in each of the ICU units in the hospital and must be regularly serviced with date of last servicing displayed on the machine at all times.</i>						
Does the ICU have a device to check the humidifier temperature?	YES	NO	N/A		2	
<b>Standard:</b> <i>When a heated humidifier is in use, monitoring of the inspired temperature must be available which alarms at high temperature</i>						
<b>Subtotal</b>					<b>26</b>	

For each item, please circle either Yes, No, or Not Applicable (N/A). All elements of the question must be satisfactorily present to indicate "yes" and award credit. Provide explanation or further comments for each "no" or "n/a" response.

	YES	NO	N/A	Comments	Allotted Scores	Scores Assessed
<b>4.2 ORGANISATION &amp; MANAGEMENT</b>						
Does the hospital have a designated senior clinical officer-in-charge of the ICU?	YES	NO	N/A		3	
Are there developed standard operating procedures and guidelines checklist on the various intensive care procedures and key operations of the ICU?	YES	NO	N/A		2	
Are these policy documents, SOPs and checklists reviewed and updated regularly?	YES	NO	N/A		3	
<b>Standard:</b> Policy documents, guidelines, checklists and SOPs are to be reviewed and updated by the ICU management team regularly at least once a year.						
Are the ICU staff trained on using and effectively following these checklists and procedures to ensure best practices at all times?	YES	NO	N/A		3	
Are there regular in-house clinical update trainings & meetings organised for the ICU team?	YES	NO	N/A		3	
<b>Standard:</b> Management should organise regular in-house training for ICU staff and surgical team on the policy and procedural documents to ensure best practices are adhered to at all times in the ICU.						
Are daily work task and schedule clearly assigned, communicated and monitored to the senior officer-in-charge?	YES	NO	N/A		1	
Is there a system for regular competency and performance assessment of ICU staff?	YES	NO	N/A		2	
<b>Standard:</b> There must be sufficient specialist staff both Doctors and Nurses with experience in intensive care medicines and operations to provide efficient patient management administration etc. There must be at least one specialist clinical consultant and senior registered Medical Doctor and senior nurse rostered to the ICU at all times.						
Do all specialist staff meet the CPD requirements of their regulatory council?	YES	NO	N/A		2	
Do all ICU staff experienced and certified in basic and advance life support?	YES	NO	N/A		2	
Is there an arrangement in place to easily and timely access a range of specialty consultant as and when needed in the ICU?	YES	NO	N/A		3	
Is the list of these consultants with their contact number made available in the ICU?	YES	NO	N/A		3	
<b>Standard:</b> There must be access to a range of specialty consultants, appropriate for the designated role when needed in the ICU						
Is the Patient-Nurse ratio in the ICU 1: 1?	YES	NO	N/A		3	
Is the Patient-Nurse ratio in the ICU 1: 2?	YES	NO	N/A		1	
Is the Patient-Nurse ratio in the ICU 1: 3?	YES	NO	N/A		1	
<b>Standard:</b> The Patient-Nurse ratio must be at least 1:1 for critically ill patient while it can be 1:2 patients for lower aciry patients						
<b>Subtotal</b>					<b>22</b>	



	YES	NO	N/A	Comments	Allotted Scores	Scores Assessed
<b>4.3 INFECTION CONTROL</b>						
Is there any hand hygiene guidelines posted in the ICU areas?	YES	NO	N/A		3	
<b>Standard:</b> <i>The WHO or CDC hand hygiene guidelines must be followed and visibly posted around the theatre unit area for all staff to see and comply.</i>						
Do ICU staff generally adhere to the hand hygiene guideline?	YES	NO	N/A		2	
Are patients' visitors made to adhere to the hand hygiene guideline?	YES	NO	N/A		2	
<b>Standard:</b> <i>The ICU staff must ensure that the hand hygiene guidelines are routinely adhere to by them and ICU visitors before and after procedures and patients contact respectively.</i>						
Are personal protective equipment (PPE) readily available for use whenever required in the ICU	YES	NO	N/A		2	
<b>Standard:</b> <i>PPEs must be readily available in adequate quantities in the ICU at all times and must be worn by all ICU staff members -clinical and non-clinical.</i>						
Are PPE discarded in appropriate disposal bags and disposed as per the hospital policy?	YES	NO	N/A		2	
Are new ICU staff trained on the appropriate use of PPE?	YES	NO	N/A		1	
Is there any security measures around the ICU?	YES	NO	N/A		2	
Is there adequate supply of the correct hand scrub disinfectant for use at all times?	YES	NO	N/A		2	
Are ICU cleaning staff trained on the appropriate cleaning of the ICU and the correct use of disinfectants?	YES	NO	N/A		2	
<b>Standard:</b> <i>ICU cleaning staff must be trained regularly on the appropriate cleaning of the ICU and the correct use of cleaning disinfectants (at least once a year)</i>						
Are ICU rooms and the waiting area cleaned daily even when not in use?	YES	NO	N/A		2	
Are ICU medicines and consumables kept in clean and safe cupboards and refrigerator?	YES	NO	N/A		1	
Are there cleaning logs available for the ICU?	YES	NO	N/A		1	
<b>Standard:</b> <i>There should be a cleaning log in place for the ICU?</i>						
Are sharps used in the ICU disposed off in correct sealable sharps bins?	YES	NO	N/A		1	
Are these sharps bins adequately available for the ICU at all times?	YES	NO	N/A		1	
Are soiled procedure equipment soaked in disinfectants before removal from the ICU procedure area?	YES	NO	N/A		2	
<b>Subtotal</b>					<b>26</b>	

For each item, please circle either Yes, No, or Not Applicable (N/A). All elements of the question must be satisfactorily present to indicate "yes" and award credit. Provide explanation or further comments for each "no" or "n/a" response.

	YES	NO	N/A	Comments	Allotted Scores	Scores Assessed
<b>4.4 PATIENTS'/CLIENTS' ENGAGEMENT AND COMMUNICATION</b>						
Does the ICU clinical team practice the minimum of 2 patients identifier system which the patient or their career also participate?	YES	NO	N/A		3	
<b>Standard:</b> <i>The hospital must adopt at least a 2 patients identifier system, in which the patient also participate to confirm the right care is being given to the right patient.</i>						
Does the ICU team respect the patients' rights, beliefs and values according to the hospital policy?	YES	NO	N/A		2	
<b>Standard:</b> <i>Patient's rights, beliefs and values must be respected as far as it is reasonably practicable when receiving care.</i>						
Do the ICU team receive informed consent from patients or their relative (if unconscious) at all times before performing an invasive procedure in accordance with the Federal Government and Hospital policy?	YES	NO	N/A		3	
<b>Standard:</b> <i>Informed consent must be required from all patients and documented in accordance with the government law before care providers initiate any invasive procedure.</i>						
Are patients/relatives educated on their disease and intended procedures so they can make informed decisions?	YES	NO	N/A		2	
Are patient's/relatives informed decisions clearly documented in patient's note?	YES	NO	N/A		2	
Are patient's/relatives communicated with in the language they mostly understand?	YES	NO	N/A		1	
<b>Subtotal</b>					<b>13</b>	

## 4.5 EQUIPMENT

Basic ICU equipment should include:

Name of Equipment	None	Available	Quantity Available	Adequate	Functional	Not Functional	Serviced Regularly	Allotted Scores	Assessed Scores
Ventilators for invasive ventilation								2	
Ventilators for non-invasive ventilation								1	
Ventilator with battery power back-up								2	
Hand ventilating assemblies								1	
Suction apparatus - <i>suction machine</i>								2	
Vascular access equipment								2	
Airway access equipment, including a bronchoscope and equipment to assist with the management of the difficult airway								2	
Defibrillation and pacing facilities								2	
Patient monitoring equipment, both invasive and non-invasive								3	
Chest drainage equipment								3	
Infusion and specialised pumps								2	
Equipment to control patient temperature both central and cutaneous								3	
Electrocardiograph								3	
Pressure monitoring equipment or arterial and central venous								3	
Pulse oximeter								3	
Arterial blood gases								3	
Oxygen via pipes								3	
Oxygen via cylinders								3	
Electrolyte machine								2	
Patient controlled analgesia machine								3	
Crash cart/resuscitation trolley								2	
Specialised beds								3	
<b>Subtotal</b>								<b>52</b>	

**Standard:** The type and quantity of equipment will vary with the type, size and function of the ICU and must be appropriate to the workload of the unit, judged by contemporary standards. There must be a regular system in place for maintenance service and checking the safety of equipment and replacement as when appropriate.

For each item, please circle either Yes, No, or Not Applicable (N/A). All elements of the question must be satisfactorily present to indicate "yes" and award credit. Provide explanation or further comments for each "no" or "n/a" response.

	YES	NO	N/A	Comments	Allotted Scores	Scores Assessed
<b>4.6 OCCURRENCE / INCIDENT MANAGEMENT</b>						
Is there any incident record book in the ICU unit?	YES	NO	N/A		2	
<b>Standard:</b> There must be an incidents record book in the ICU according to hospital policy and a designated senior clinical officer to oversee the management of recorded incidents in the unit.						
Are ICU staff made aware and encouraged to fill in the incidents record book?	YES	NO	N/A		3	
<b>Standard:</b> Management are expected to practice a non-punitive and no-blame culture on reported incidents so as to encourage staff to report and respond to incidents in a timely manner except when it becomes obviously necessary to do otherwise.						
Are patient safety incidents during procedures identified and reported on time?	YES	NO	N/A		2	
Are these incidents managed and responded to according to the hospital incidence policy?	YES	NO	N/A		2	
Are reported patient adverse-events collated and analysed periodically to identify trends and used to improve the quality of intensive care services in the hospital?	YES	NO	N/A		2	
<b>Standard:</b> Hospital management should use collated adverse incident records to inform strategic actions that will prevent or reduce reoccurrence rate.						
<b>Subtotal</b>					<b>11</b>	

	YES	NO	N/A	Comments	Allotted Scores	Scores Assessed
<b>4.7 WASTE MANAGEMENT</b>						
Are all the ICU clinical and non-clinical staff conversant with hospital waste management policy?	YES	NO	N/A		2	
<b>Standard:</b> The hospital must have a waste management policy and ensure that all relevant clinical and non-clinical staff are aware, trained and understand the policy.						
Are waste segregation performed as appropriate at the site of generation in the ICU?	YES	NO	N/A		2	
<b>Standard:</b> Waste segregation done at its site of generation reduces the volume of cross-contamination during transportation to disposal site.						
Are medical wastes collected in covered leak-proof containers from the ICU always?	YES	NO	N/A		3	
Are medical wastes collected to the centralised disposal sites daily?	YES	NO	N/A		3	
<b>Standard:</b> Wastes generated from procedures must be collected daily to the centralised waste collection area.						
<b>Subtotal</b>					<b>10</b>	



## SUMMARY

Noted Challenges:

Noted Recommendations: