



ANAESTHESIOLOGY (CARDIOTHORACIC)				
NO	INDICATOR	DIMENSION	STANDARD	SECONDARY DATA REPORTING FREQUENCY
1	Percentage of post-elective cardiopulmonary bypass adult patients with blood glucose level \leq 11 mmol/L on arrival to Cardiac Intensive Care Unit (CICU)	Effectiveness	\geq 90%	6 Monthly
2	Percentage of accidental carotid arterial puncture during central venous cannulation via Internal Jugular Vein (IJV) approach	Safety	\leq 5%	3 Monthly
3	Percentage of thoracic surgical patients received Acute Pain Service (APS)	Customer centeredness	\geq 75%	3 Monthly



Discipline	:	Anaesthesiology (Cardiothoracic)									
Indicator 1	:	Percentage of post-elective cardiopulmonary bypass adult patients with blood glucose level \leq 11 mmol/L on arrival to Cardiac Intensive Care Unit (CICU)									
Dimension of Quality	:	Effectiveness									
Rationale	:	<ol style="list-style-type: none"> 1. Post-operative patient with high blood glucose level is associated with surgical wound infection and prolonged hospital stay. 2. Post-operative sugar is a reflection of sugar control intraoperatively as most patients undergoing cardiopulmonary bypass are usually diabetic and requiring inotrope intraoperatively. 									
Definition of Terms	:	Adult: Age \geq 18 years.									
Criteria	:	<p>Inclusion:</p> <ol style="list-style-type: none"> 1. All adult patients that underwent elective cardiopulmonary bypass. <p>Exclusion: NA</p>									
Type of indicator	:	Rate-based outcome indicator									
Numerator	:	Number of post-elective cardiopulmonary bypass adult patients with blood glucose level \leq 11mmol/L on arrival to CICU									
Denominator	:	Total number of post-elective cardiopulmonary adult patients in CICU									
Formula	:	$\frac{\text{Numerator}}{\text{Denominator}} \times 100\%$									
Standard	:	$\geq 90\%$									
Data Collection & Verification	:	<ol style="list-style-type: none"> 1. Where: Data will be collected in CICU. 2. Who: Data will be collected by Officer/ Paramedic/ Nurse in-charge of the department/ unit. 3. How to collect: Data is suggested to be collected from patient's case notes/ CICU admission record book. 4. How frequent: Monthly data collection within department. Validated summarised secondary data to be sent 6 monthly to Quality Unit of the respective hospital for monitoring. PVF to be sent 6 monthly to Quality Unit of hospital. 5. Who should verify: <table border="1" data-bbox="604 1325 1419 1497"> <thead> <tr> <th></th> <th>Prepared by</th> <th>Validated by</th> </tr> </thead> <tbody> <tr> <td>Primary Data</td> <td>Officer/ Paramedic/ Nurse in-charge</td> <td>Supervisor of the person who prepared the data</td> </tr> <tr> <td>Secondary Data</td> <td>Officer/ Paramedic/ Nurse in-charge</td> <td>Head of Department/ Specialist in-charge</td> </tr> </tbody> </table> <p>PVF must be verified by Head of Department, Head of Quality Unit and Hospital Director.</p>		Prepared by	Validated by	Primary Data	Officer/ Paramedic/ Nurse in-charge	Supervisor of the person who prepared the data	Secondary Data	Officer/ Paramedic/ Nurse in-charge	Head of Department/ Specialist in-charge
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Remarks	:										

Discipline	:	Anaesthesiology (Cardiothoracic)
Indicator 2	:	Percentage of accidental carotid arterial puncture during central venous cannulation via Internal Jugular Vein (IJV) approach
Dimension of Quality	:	Safety



Rationale	:	<ol style="list-style-type: none"> 1. The use of central venous catheter via the IJV approach is frequently required in the management of cardiothoracic patients. 2. Accidental carotid artery puncture has an incidence of 6-25% and is associated with morbidity. 3. A standard of 5% was taken for this indicator as most central venous catheter insertion is done by well trainer personnel. 									
Definition of Terms	:	Accidental carotid artery puncture: Process whereby the cannulating needle accidentally punctures the carotid artery during insertion.									
Criteria	:	<p>Inclusion:</p> <ol style="list-style-type: none"> 1. All IJV cannulations done in cardiothoracic cases. <p>Exclusion: NA</p>									
Type of indicator	:	Rate-based process indicator									
Numerator	:	Number of accidental carotid arterial punctures during central venous cannulation via IJV approach									
Denominator	:	Total number of central venous cannulation via IJV approach performed									
Formula	:	$\frac{\text{Numerator}}{\text{Denominator}} \times 100\%$									
Standard	:	≤ 5%									
Data Collection & Verification	:	<ol style="list-style-type: none"> 1. Where: Data will be collected OT/ Cardiac ICU/ CRW or wards that cater for the above condition. 2. Who: Data will be collected by Officer/ Paramedic/ Nurse in-charge of the department/ unit. 3. How to collect: Data is suggested to be collected from patient's case notes/ procedure book. 4. How frequent: Monthly data collection within department. Validated summarised secondary data to be sent 3 monthly to Quality Unit of the respective hospital for monitoring. PVF to be sent 6 monthly to Quality Unit of hospital. 5. Who should verify: <table border="1" data-bbox="604 1245 1419 1417"> <thead> <tr> <th></th> <th>Prepared by</th> <th>Validated by</th> </tr> </thead> <tbody> <tr> <td>Primary Data</td> <td>Officer/ Paramedic/ Nurse in-charge</td> <td>Supervisor of the person who prepared the data</td> </tr> <tr> <td>Secondary Data</td> <td>Officer/ Paramedic/ Nurse in-charge</td> <td>Head of Department/ Specialist in-charge</td> </tr> </tbody> </table> <p>PVF must be verified by Head of Department, Head of Quality Unit and Hospital Director.</p>		Prepared by	Validated by	Primary Data	Officer/ Paramedic/ Nurse in-charge	Supervisor of the person who prepared the data	Secondary Data	Officer/ Paramedic/ Nurse in-charge	Head of Department/ Specialist in-charge
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Discipline	:	Anaesthesiology (Cardiothoracic)
Indicator 3	:	Percentage of thoracic surgical patients received Acute Pain Service (APS)
Dimension of Quality	:	Customer centeredness
Rationale	:	Effective postoperative pain relief via APS helps reduce morbidity, aids recovery and decrease hospital length of stay.
Definition of Terms	:	Thoracic surgery patients: It includes both elective and emergency cases.



Criteria	: Inclusion: <ol style="list-style-type: none"> 1. All thoracic surgical cases, both elective and emergency. 2. Closed cardiothoracic surgery with thoracic approach (e.g. PDA ligation). 3. Postoperative admission to Intensive Care Unit, High Dependency Ward and surgical ward. 4. Patients of ≥ 12 years of age. Exclusion: <ol style="list-style-type: none"> 1. All cases requiring cardiopulmonary bypass. 2. Patient who died intra-operatively. 3. Patient who underwent surgery under local anaesthesia or sedation. 4. Patients of < 12 years of age. 									
Type of indicator	: Rate-based output indicator									
Numerator	: Number of patients on APS following thoracic surgery under general/ regional anaesthesia									
Denominator	: Total number of patients who underwent thoracic surgery under general/ regional anaesthesia									
Formula	: $\frac{\text{Numerator}}{\text{Denominator}} \times 100\%$									
Standard	: $\geq 75\%$									
Data Collection & Verification	: <ol style="list-style-type: none"> 1. Where: Data will be collected in Cardiac ICU/ CRW/ HDW/ surgical wards or wards that cater for the above condition. 2. Who: Data will be collected by Officer/ Paramedic/ Nurse in-charge of the department/ unit. 3. How to collect: Data is suggested to be collected from patient's case notes/ OT list/ APS record book. 4. How frequent: Monthly data collection within department. Validated summarised secondary data to be sent 3 monthly to Quality Unit of the respective hospital for monitoring. PVF to be sent 6 monthly to Quality Unit of hospital. 5. Who should verify: <table border="1" data-bbox="602 1276 1398 1451"> <thead> <tr> <th></th> <th>Prepared by</th> <th>Validated by</th> </tr> </thead> <tbody> <tr> <td>Primary Data</td> <td>Officer/ Paramedic/ Nurse in-charge</td> <td>Supervisor of the person who prepared the data</td> </tr> <tr> <td>Secondary Data</td> <td>Officer/ Paramedic/ Nurse in-charge</td> <td>Head of Department/ Specialist in-charge</td> </tr> </tbody> </table> <p>PVF must be verified by Head of Department, Head of Quality Unit and Hospital Director.</p>		Prepared by	Validated by	Primary Data	Officer/ Paramedic/ Nurse in-charge	Supervisor of the person who prepared the data	Secondary Data	Officer/ Paramedic/ Nurse in-charge	Head of Department/ Specialist in-charge
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