BURN AND TRAUMA				
NO	**INDICATOR**	**DIMENSION**	**STANDARD**	**SECONDARY DATA REPORTING FREQUENCY**
1	Turnaround time from booking OT for crash laparotomy to surgery within (≤) 60 minutes	Efficiency	≥ 90%	3 Monthly
2	Survival rate of trauma patients with Injury Severity Score (ISS) less than (<) 16	Effectiveness	≥ 95%	3 Monthly
3	Percentage of trauma laparotomy cases performed without complication	Safety	≥ 95%	3 Monthly

<table>
<tr><td>Discipline</td><td>:</td><td>Burn and Trauma</td></tr>
<tr><td>Indicator 1</td><td>:</td><td>Turnaround time from booking OT for crash laparotomy to surgery within (≤) 60 minutes</td></tr>
<tr><td>Dimension of Quality</td><td>:</td><td>Efficiency</td></tr>
<tr><td>Rationale</td><td>:</td><td>1. In a hypotensive patient due to exsanguinating intra-abdominal bleeding, urgent surgical intervention for haemostasis is required. Crash laparotomy to arrest the bleeding is part of the resuscitative process for these patients.
2. This indicator needs to be monitored as a delay from making a call to OT and time of surgical intervention can affect patient's survival.</td></tr>
<tr><td>Definition of Terms</td><td>:</td><td>Crash laparotomy: An urgent laparotomy that needs to be carried out for surgical haemostasis in a hypotensive patient due to exsanguinating intra-abdominal bleed.</td></tr>
<tr><td>Criteria</td><td>:</td><td>Inclusion:
1. All haemodynamically unstable patients due to intra-abdominal bleed seen in Emergency Department indicated for urgent laparotomy.
2. All haemodynamically unstable patient due to intra-abdominal bleed seen in ICU or ward indicated for urgent laparotomy after failed non-operative management.

Exclusion:
1. All patients who require laparotomy for peritonitis and are hemodynamically stable.
2. All patient referred on table for trauma laparotomy.</td></tr>
<tr><td>Type of indicator</td><td>:</td><td>Rate-based process indicator</td></tr>
<tr><td>Numerator</td><td>:</td><td>Number of crash laparotomies started within (≤) 60 minutes of making a call to OT</td></tr>
<tr><td>Denominator</td><td>:</td><td>Total number of crash laparotomies</td></tr>
<tr><td>Formula</td><td>:</td><td>Numerator x 100%
Denominator</td></tr>
<tr><td>Standard</td><td>:</td><td>≥ 90%</td></tr>
<tr><td>Data Collection & Verification</td><td>:</td><td>1. Where: Data will be collected in ICU/ 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 notes/ OT 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>
<tr><td></td><td>Prepared by</td><td>Validated by</td></tr>
<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>
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PVF must be verified by Head of Department, Head of Quality Unit and Hospital Director.</td></tr>
<tr><td>Remarks</td><td>:</td><td></td></tr>
</table>

<table>
<tr><td>Discipline</td><td>:</td><td>Burn and Trauma</td></tr>
<tr><td>Indicator 2</td><td>:</td><td>Survival rate of trauma patients with Injury Severity Score (ISS) less than (<) 16</td></tr>
</table>

Dimension of Quality	:	Effectiveness
Rationale	:	1. Injury Severity Score (ISS) is widely used severity scoring system for trauma and is practised internationally. 2. Patient with an ISS score of less than 16 are classified as minor trauma. 3. Patients with minor trauma injuries have a very good prognosis. 4. This indicator needs to be monitored as a drop in survival rate is suggestive of suboptimal care received by the patients.
Definition of Terms	:	**Injury Severity Score (ISS):** An anatomical scoring system that provides an overall severity score for patients with multiple injuries. ISS (from Susan Baker) is also synonymously used with NISS (New ISS- from Osler).
Criteria	:	**Inclusion:** 1. Inpatients mortality in all trauma patients admitted with an ISS score less than 16 (ISS <16). 2. All patients with an ISS score < 16 who were discharged and brought in dead due to trauma related causes. **Exclusion:** 1. Death of patients with minor trauma who presented late (after 24 hours) to the hospital or were transferred in after a period of hospitalization in another facility. 2. Patients with minor trauma and died due to other cause not directly related to trauma (e.g. patient who had humerus fracture, but died due to myocardial infarction).
Type of indicator	:	Rate-based outcome indicator
Numerator	:	Number of trauma patients with ISS <16 who survived
Denominator	:	Total number of trauma patients with ISS <16
Formula	:	Numerator x 100% Denominator
Standard	:	≥ 95%
Data Collection & Verification	:	1. **Where**: Data will be collected in ICU/ 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/ admission & discharge 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**:

	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	:	**Burn and Trauma**

<table>
<tr><td>Indicator 3</td><td>:</td><td>Percentage of trauma laparotomy cases performed without complication</td></tr>
<tr><td>Dimension of Quality</td><td>:</td><td>Safety</td></tr>
<tr><td>Rationale</td><td>:</td><td>Any complications arising from trauma laparotomy will lead to more morbidity and mortality to the patient.
Reference: National and international policies of the ‘Safe Surgery Safe Life’.</td></tr>
<tr><td>Definition of Terms</td><td>:</td><td>Trauma laparotomy: Any laparotomy done for intra-abdominal injury.

Complications of laparotomy:
• Iatrogenic bowel injury.
• Iatrogenic solid organ injury.
• Iatrogenic abdominal vascular injury.
• Anastomotic leak post bowel anastomosis.
• Miss obvious major injuries – solid organ or bowel injuries.
• Bleeding post splenectomy.</td></tr>
<tr><td>Criteria</td><td>:</td><td>Inclusion:
1. All trauma laparotomies done within the facility.

Exclusion:
1. All trauma laparotomies done by other facilities and transferred in for further management.
2. Non trauma related/ medical complications (e.g. Myocardial Infarction, respiratory failure, Acute Kidney Injury).</td></tr>
<tr><td>Type of indicator</td><td>:</td><td>Rate-based outcome indicator</td></tr>
<tr><td>Numerator</td><td>:</td><td>Number of trauma laparotomy cases performed without complication</td></tr>
<tr><td>Denominator</td><td>:</td><td>Total number of trauma laparotomy cases performed</td></tr>
<tr><td>Formula</td><td>:</td><td>Numerator x 100%
Denominator</td></tr>
<tr><td>Standard</td><td>:</td><td>≥ 95%</td></tr>
<tr><td>Data Collection & Verification</td><td>:</td><td>1. Where: Data will be collected in ICU or wards that cater for the above condition.
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