Performance Indicators

MSQH

Hospital Accreditation Standards
5th Edition

2017
MESSAGE FROM THE CHIEF EXECUTIVE OFFICER
MALAYSIAN SOCIETY FOR QUALITY IN HEALTH

This document is the guide for the measurement of Performance Indicators identified for each Service Standards in the MSQH Hospital Accreditation Standards - 5th Edition; developed, implemented and co-ordinated by the Malaysian Society for Quality in Health (MSQH), a healthcare standards and accreditation body in Malaysia.

The contents of this document may change from time to time at the discretion of the MSQH Committee, to reflect changes in strategy, policy direction and process guide consequent to reforms in the international and the Malaysian Healthcare arena, inputs and feedback from its stakeholders, as well as from external and internal clients of MSQH to accommodate the current needs of each service.

The improvement of safety and quality of services will require objective measurements of the quality of care as well as the expected outcomes. This requires the development of objective performance measurements that will measure structure, process and outcomes including technology or other relevant areas. This will require multi-disciplinary and collaborative approaches to achieve better and safer healthcare outcomes.

Let this MSQH Performance Indicators Guide be a testimony to the untiring efforts of all those who have developed these indicators and MSQH surveyors in their pursuit of institutionalisation of a culture of measuring performance improvement.

I wish you every success in implementing as well as improving the safety and quality of Healthcare services.

Assoc. Prof. Dr M.A. Kadar Marikar
Chief Executive Officer, MSQH
<table>
<thead>
<tr>
<th></th>
<th>GOVERNANCE, LEADERSHIP &amp; DIRECTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>ENVIRONMENTAL AND SAFETY SERVICES</td>
</tr>
<tr>
<td>3</td>
<td>FACILITY AND BIOMEDICAL EQUIPMENT MANAGEMENT AND SAFETY</td>
</tr>
<tr>
<td>4</td>
<td>NURSING SERVICES</td>
</tr>
<tr>
<td>5</td>
<td>PREVENTION AND CONTROL OF INFECTION</td>
</tr>
<tr>
<td>7</td>
<td>HEALTH INFORMATION MANAGEMENT SYSTEM</td>
</tr>
<tr>
<td>8</td>
<td>EMERGENCY SERVICES</td>
</tr>
<tr>
<td>9</td>
<td>CLINICAL SERVICES - NON-SPECIALIST FACILITY (FOR DISTRICT HOSPITALS)</td>
</tr>
<tr>
<td>9A</td>
<td>CLINICAL SERVICES - MEDICAL RELATED SERVICES</td>
</tr>
<tr>
<td>9B</td>
<td>CLINICAL SERVICES - SURGICAL RELATED SERVICES</td>
</tr>
<tr>
<td>9C</td>
<td>CLINICAL SERVICES - OBSTETRICS AND GYNAECOLOGY SERVICES</td>
</tr>
<tr>
<td>9D</td>
<td>CLINICAL SERVICES - PAEDIATRIC SERVICES</td>
</tr>
<tr>
<td>9E</td>
<td>CLINICAL SERVICES - CARDIOLOGY SERVICES</td>
</tr>
<tr>
<td>9F</td>
<td>CLINICAL SERVICES - ONCOLOGY SERVICES</td>
</tr>
<tr>
<td>10</td>
<td>ANAESTHETIC SERVICES</td>
</tr>
<tr>
<td>11</td>
<td>OPERATING SUITE SERVICES</td>
</tr>
<tr>
<td>12</td>
<td>AMBULATORY CARE SERVICES</td>
</tr>
<tr>
<td>13</td>
<td>CRITICAL CARE SERVICES - ICU/CCU/CICU/CRW/HDU/BURNS CARE UNIT</td>
</tr>
<tr>
<td>13A</td>
<td>CRITICAL CARE SERVICES - SCN/NICU/PICU/PHDW</td>
</tr>
<tr>
<td>13B</td>
<td>CRITICAL CARE SERVICES - LABOUR/DELIVERY SERVICES</td>
</tr>
<tr>
<td>13C</td>
<td>CHRONIC DIALYSIS TREATMENT</td>
</tr>
<tr>
<td>14</td>
<td>RADIOLOGY/DIAGNOSTIC IMAGING SERVICES</td>
</tr>
<tr>
<td>15</td>
<td>PATHOLOGY SERVICES</td>
</tr>
<tr>
<td>16</td>
<td>BLOOD TRANSFUSION SERVICES</td>
</tr>
<tr>
<td>17</td>
<td>REHABILITATION MEDICINE SERVICES</td>
</tr>
<tr>
<td>17A</td>
<td>ALLIED HEALTH PROFESSIONAL SERVICES - PHYSIOTHERAPY SERVICES</td>
</tr>
<tr>
<td>17B</td>
<td>ALLIED HEALTH PROFESSIONAL SERVICES - OCCUPATIONAL THERAPY SERVICES</td>
</tr>
<tr>
<td>17C</td>
<td>ALLIED HEALTH PROFESSIONAL SERVICES - DIETETIC SERVICES</td>
</tr>
<tr>
<td>17D</td>
<td>ALLIED HEALTH PROFESSIONAL SERVICES - SPEECH-LANGUAGE THERAPY SERVICES</td>
</tr>
<tr>
<td>17E</td>
<td>ALLIED HEALTH PROFESSIONAL SERVICES - AUDIOLOGY SERVICES</td>
</tr>
<tr>
<td>17F</td>
<td>ALLIED HEALTH PROFESSIONAL SERVICES - OPTOMETRY SERVICES</td>
</tr>
<tr>
<td>17G</td>
<td>ALLIED HEALTH PROFESSIONAL SERVICES - HEALTH EDUCATION SERVICES</td>
</tr>
<tr>
<td>17H</td>
<td>ALLIED HEALTH PROFESSIONAL SERVICES - MEDICAL SOCIAL SERVICES</td>
</tr>
<tr>
<td>17I</td>
<td>ALLIED HEALTH PROFESSIONAL SERVICES - PSYCHOLOGY COUNSELLING SERVICES</td>
</tr>
<tr>
<td>17J</td>
<td>ALLIED HEALTH PROFESSIONAL SERVICES - CLINICAL PSYCHOLOGY SERVICES</td>
</tr>
<tr>
<td>18</td>
<td>PHARMACY SERVICES</td>
</tr>
<tr>
<td>19</td>
<td>CENTRAL STERILISING SUPPLY SERVICES (CSSS)</td>
</tr>
<tr>
<td>20</td>
<td>HOUSEKEEPING SERVICES</td>
</tr>
<tr>
<td>21</td>
<td>LINEN SERVICES</td>
</tr>
<tr>
<td>22</td>
<td>FOOD SERVICES</td>
</tr>
<tr>
<td>23</td>
<td>FORENSIC MEDICINE SERVICES</td>
</tr>
<tr>
<td>23A</td>
<td>MORTUARY SERVICES</td>
</tr>
<tr>
<td>24</td>
<td>STANDARDS FOR GENERAL APPLICATION - GENERIC</td>
</tr>
<tr>
<td>24A</td>
<td>STANDARDS FOR CLINICAL RESEARCH CENTRE</td>
</tr>
</tbody>
</table>
## SERVICE STANDARD 01: GOVERNANCE, LEADERSHIP AND DIRECTION

There is tracking and trending of the following specific performance indicators for the service:

<table>
<thead>
<tr>
<th>No</th>
<th>INDICATOR</th>
<th>TARGET</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Percentage of patients leaving hospital against medical advice relative to all patients hospitalised within a specified period</td>
<td>Downward Trends</td>
<td>Monthly</td>
</tr>
<tr>
<td>2.</td>
<td>Percentage of incidents/accidents during hospitalisation of patients as percentage of all admitted patients</td>
<td>Downward Trends</td>
<td>Monthly</td>
</tr>
<tr>
<td>3.</td>
<td>Hospital wide patient satisfaction survey (six monthly basis)</td>
<td>&gt; 80% patient satisfaction level</td>
<td>6 Monthly</td>
</tr>
<tr>
<td>4.</td>
<td>In addition, healthcare facilities are required to monitor any other two (2) indicators with tracking and trending analysis to support its goals and objectives (This is Hospital Management related performance)</td>
<td></td>
<td>6 monthly</td>
</tr>
</tbody>
</table>
**SERVICE STANDARD 01: GOVERNANCE, LEADERSHIP AND DIRECTION**

<table>
<thead>
<tr>
<th>Indicator 01:</th>
<th>Percentage of patients leaving hospital against medical advice relative to all patients hospitalised within a specified period.</th>
</tr>
</thead>
</table>

**Rationale:**
This indicator was selected as a generic indicator of the quality of in-patient care because:

- Incidence of patients discharged At Own Risk (AOR) against medical advice is still prevalent in hospitals especially those without specialist services.
- AOR discharge occurring frequently is a proxy indication of lack of confidence of the patients in the care given at the facility.
- The occurrence of AOR discharge should be minimised to include mainly those seeking higher levels of care or facilities with better amenities.

**Definition of Term:**

*Discharge against medical advice (AOR Discharge)*
Patient discharges himself/herself from the hospital when he/she is deemed not fit medically despite being advised against it.

**Inclusion Criteria**
- Patients discharged AOR but returned for re-admission

**Exclusion Criteria**
- NA

**Type of Indicator**
- Rate Based Process Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Total number of patients discharged against medical advice during the month</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Total number of patients admitted during the month</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Target</th>
<th>Downward Trend</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Collection</td>
<td>Monthly</td>
</tr>
<tr>
<td>Comments/Review</td>
<td>-</td>
</tr>
</tbody>
</table>
Rationale:
This indicator was selected as a generic indicator of the delivery of safe patient care because:
- A key component of clinical governance framework is the responsibility of every health care leader to ensure that their organisation monitors and acts on incidents that can potentially compromise patient and staff safety in their organisations.
- Incident Reporting ensures sharing of lessons learnt from incidents, root cause analysis and best practices in patient safety.
- Incident Reporting facilitates patient and staff safety efforts including the reduction of risk to patients and staff.

Definition of Terms:
1. Incidents occurring during hospitalisation of patients:
   Any deviation from usual medical care that causes an injury to the patient or poses risk of harm, that include near misses, errors, preventable Adverse Events and hazards:
   - Near Misses - A near miss in medicine is an event that might have resulted in harm but the problem did not reach the patient because of timely intervention by healthcare providers or the patient or family, or due to good fortune. Near misses may also be referred to as "close calls" or “good catches.” (Ref: Institute of Medicine, USA)
   - Adverse Event - An injury related to medical management rather than complications of disease. Medical management includes all aspects of care including diagnosis and treatment, failure to diagnose and treat and the systems and equipment used to deliver care. Adverse events maybe preventable or non-preventable.
   - Errors are mishaps that have the potential to cause an adverse event.
   - Hazard refers to any threat to safety e.g. unsafe practices, conduct, equipment, labels and names.

2. Incident Reporting:
An Incident Reporting System refers to the processes and technology involved in the standardization, formatting, communication, feedback, analysis, learning, response and dissemination of lessons learned from reported events; and analysing the incidents scientifically in a structured manner through Root Cause Analysis.

<table>
<thead>
<tr>
<th>Inclusion Criteria</th>
<th>Exclusion Criteria</th>
<th>Type of Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>All accidents &amp; incidents, near misses, adverse events</td>
<td>NA</td>
<td>Rate Based Outcome Indicator</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Denominator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of incidents and accidents experienced by all inpatients over a month</td>
<td>Total number of admissions over the same month X 100%</td>
</tr>
</tbody>
</table>

Target:
Downward Trend

Data Collection:
Monthly

Comments/Review:
-
SERVICE STANDARD 01: GOVERNANCE, LEADERSHIP AND DIRECTION

Indicator 03: Hospital wide patient satisfaction survey (six monthly basis)

Rationale:
This indicator was selected:
- As proxy to measurement of patient-centred services and level of client satisfaction to meeting patient needs from registration for out-patient care to admission and hospital stay for care and treatment.
- Patient Satisfaction Survey is one of the tools that can be used in recognizing areas for improvement in the hospital services provided.

Definition of Terms:

Patient Satisfaction Survey
Patient satisfaction survey is a measure of the extent to which a patient is content with the care they received from their healthcare providers as well as the environment and amenities within the facility. Refers to the survey responses through a set of Survey Questionnaire.

| Inclusion Criteria | : Patients who participates in the patient satisfaction survey (out-patients and in-patients) |
| Exclusion Criteria | : NA |
| Type of Indicator | : Rate Based Process Indicator |

Numerator: Number of participating patients (out-patient & in-patients) who indicated they were ‘satisfied’ in the patient satisfaction survey with > 80% satisfaction level

Denominator: Total number of patients who participated in the Patient Satisfaction Survey

Target: > 80% patient satisfaction level
Data Collection: 6 Monthly
Comments/Review: –
## SERVICE STANDARD 02: ENVIRONMENTAL AND SAFETY SERVICES

There is tracking and trending of specific performance indicators not limited to but at least two (2) of the following including the mandatory indicator.

<table>
<thead>
<tr>
<th>No</th>
<th>INDICATOR</th>
<th>TARGET</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Percentage of new staff (includes all on-site outsourced service providers) given orientation on Environmental, Safety and Health Policy and Programme</td>
<td>80%</td>
<td>6 Monthly</td>
</tr>
<tr>
<td>2.</td>
<td>Percentage of staff given continuous training in specific aspects of Environmental, Safety and Health</td>
<td>80%</td>
<td>3 Monthly</td>
</tr>
<tr>
<td>3.</td>
<td><strong>Mandatory</strong>&lt;br&gt;Percentage of workplace hazards identified and risk managed</td>
<td>100%</td>
<td>Monthly</td>
</tr>
</tbody>
</table>
### SERVICE STANDARD 02: ENVIRONMENTAL AND SAFETY SERVICES

<table>
<thead>
<tr>
<th>Indicator 01</th>
<th>Percentage of new staff (includes all on site out sourced service providers) given orientation on Environmental, Safety and Health Policy and Programme</th>
</tr>
</thead>
</table>

**Rationale**: This indicator was selected because:

- Knowledge on Environmental, Safety and Health Policy and Programme is an important aspect of patient and staff safety for all health care personnel to acquire. It is an important element of continuing education on occupational safety and health to ensure staffs are aware of and work and provide care in a safe environment.

- The Hospital Safety and Health Committee must undertake intense surveillance of the incidence of needle stick injury, patient falls among others which are proxy indicators of the effectiveness of the safety program and risk management in the hospital.

**Definition of Terms**:

**Safety and Health Requirements**: As per Occupational Safety and Health Act 1994 & Private Healthcare Facilities and Services Act 1998, Regulations 2006

**Inclusion Criteria**: All new staff including onsite outsourced services staff

**Exclusion Criteria**: NA

**Type of Indicator**: Rate Based Process Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>: Total number of new staff (including all on site out-sourced service providers) given orientation on Environmental, Safety and Health Policy and Programme X 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>: Total number of new staff in the Facility - Full Time staff equivalent (including all on site out-sourced service providers)</td>
</tr>
</tbody>
</table>

**Target**: 80%

**Data Collection**: 6 Monthly

**Comments/Review**: -
SERVICE STANDARD 02: ENVIRONMENTAL AND SAFETY SERVICES

Indicator 02: Percentage of staff given continuous training in specific aspects of Environmental, Safety and Health

**Rationale:** This indicator was selected as a generic indicator on staff awareness and practices on safety and health requirements because:

- Knowledge on Environmental, Safety and Health Policy and Programme is an important aspect of patient and staff safety for all health care personnel to acquire. It is an important element of continuing education on occupational safety and health to ensure staffs are aware of and work and provide care in a safe environment.

- The Hospital Safety and Health Committee must undertake intense surveillance of the incidence of needle stick injury, patient falls among others which are proxy indicators of the effectiveness of the safety program and risk management in the hospital.

**Definition of Terms:**

1. **Continuous Training:**

   Refers to continuing education/training program designed to educate an individual and give him or her further skills or knowledge to be applied in his or her line of work. These programs are intended to educate persons on new advancements, or to build upon a person's expertise in a given field and/or as required to maintain certification or licensure.

2. **Safety and Health Requirements:** As per Occupational Safety and Health Act 1994 & Private Healthcare Facilities and Services Act 1998, Regulations 2006

3. **Specific Aspects of Environmental, Safety & Health** - As per MSQH Standard No. 02, these include:
   - a) Occupational Safety and Health
   - b) Fire Safety
   - c) Disaster Management: External Disaster & Internal Disaster
   - d) Hazardous Material and Recyclable Waste Management
   - e) Security Services
   - f) Vector and Pest Control

**Inclusion Criteria:** All staff working in the facility (including on site out-sourced service providers)

**Exclusion Criteria:** Clinical Risk Management programme

**Type of Indicator** : Rate Based Process Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Denominator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of staff (including all on site out-sourced service providers) given continuing training in specific aspects of Environmental, Safety and Health</td>
<td>Total number of staff in the Facility - Full Time staff equivalent (including all on site out-sourced service providers) X 100%</td>
</tr>
</tbody>
</table>

**Target** : 80%

**Data Collection** : 3 Monthly

**Comments/Review** : -
SERVICE STANDARD 02: ENVIRONMENTAL AND SAFETY SERVICES

Indicator 03 : Percentage of workplace hazards identified and risk managed

Rationale : This indicator was selected as a generic indicator to:

- Reflect the implementation of Safety and Health activities in the Facility to provide a safe workplace for staff as well as safe environment for patients and visitors. Hazard Identification Risk Analysis and Control (HIRAC) Program including mitigation of risks at the work place and processes for the various activities and coordination and linkages with other Risk Management activities should be clearly defined and implemented to ensure a safe environment for patients, staff and visitors.

Definition of Terms:

1. Workplace Health and Safety:
   Is a multidisciplinary field concerned with the safety, health, and welfare of people at work? The goals of occupational safety and health programs include ensuring a safe and healthy work environment. Occupational Safety and Health also protects co-workers, patients, family members, employers, customers and many others who might be affected by the workplace environment. All organizations have the duty to ensure that employees and any other person who may be affected by the organization's activities remain safe at all times.

2. Workplace Hazards:
   Workplace hazards can come from a wide range of sources. An occupational or workplace hazard is a thing or situation with the potential to harm a worker. Occupational hazards can be divided into two categories: safety hazards that cause accidents that physically injure workers, and health hazards which result in the development of disease. Hazards can also be rated according to the severity of the harm they cause - a significant hazard being one with the potential to cause a critical injury, acute and chronic diseases and/or death.

3. Categorization of Hazards/Risks:
   a) Hazards/risks can be grouped under various categories as listed below:
      - Bio-mechanical and Postural
      - Physical Environment and Workplace Design
      - Mechanical
      - Radiation
      - Electrical
      - Chemicals and Toxicity
      - Biological and Human
      - Organizational and Procedural Arrangements eg sharps injury
      - Psycho- Social Environment and Task Design
      - Natural Environment
   
   b) Levels of Risks:
      Risk Assessments are based on two(2) key factors:
      - the severity of any injury/illness resulting from the hazard and
      - the probability that the injury/illness will actually occur

Inclusion Criteria : All incidences of hazards occurring in the workplace related to employees (including on site out-sourced service providers), patients and visitors

Exclusion Criteria : Clinical Risks/adverse events

Type of Indicator : Rate Based Process Indicator
<table>
<thead>
<tr>
<th>Numerator</th>
<th>Total number of workplace hazards occurring among staff, patients and visitors in all sectors of the facility identified and risks managed over a specific period</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Total number of workplace hazards occurring among staff, patients and visitors in all sectors of the Facility over a specific period</td>
</tr>
<tr>
<td>Target</td>
<td>100%</td>
</tr>
<tr>
<td>Data Collection</td>
<td>Three (3) Monthly</td>
</tr>
<tr>
<td>Comments/Review</td>
<td>–</td>
</tr>
</tbody>
</table>
## SERVICE STANDARD 03: FACILITY AND BIOMEDICAL EQUIPMENT MANAGEMENT & SAFETY

There is tracking and trending of specific performance indicators not limited to but at least two (2) of the following:

<table>
<thead>
<tr>
<th>No</th>
<th>INDICATOR</th>
<th>TARGET</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Percentage of Planned Preventive Maintenance being done on schedule</td>
<td>98%</td>
<td>Monthly</td>
</tr>
<tr>
<td>2.</td>
<td>Percentage of work orders completed on schedule.</td>
<td>98%</td>
<td>Monthly</td>
</tr>
<tr>
<td>3.</td>
<td>Percentage of system/service downtime</td>
<td>5%</td>
<td>Monthly</td>
</tr>
<tr>
<td>4.</td>
<td>Response time to equipment failure</td>
<td>Critical care equipment – 15 minutes Others equipment – 30 minutes)</td>
<td>Monthly</td>
</tr>
</tbody>
</table>
SERVICE STANDARD 03: FACILITY AND BIOMEDICAL EQUIPMENT MANAGEMENT & SAFETY

Indicator 01: Percentage of Planned Preventive Maintenance being done on schedule

**Rationale**: This indicator was selected as a generic indicator of the delivery of safe patient care in the hospital because:

- Planned preventive maintenance of facilities and equipment in a hospital is an important component of Facility Management to provide safe patient care.

- Without regular maintenance there will be likelihood of increasing demands for high-cost maintenance elements such as building services, re-roofing, or structural repairs. Therefore, it is financially advantageous, if not essential, to have a Planned Preventative Maintenance (PPM) schedule. A PPM schedule can ensure that routine maintenance and repair works are implemented to ease out peaks and troughs in the annual maintenance cost cycle of buildings and equipment and ensure safe patient care without interruptions to life saving procedures.

- Long-term benefits of preventive maintenance include:
  - Improved system reliability
  - Reduced replacement costs
  - Decreased system downtime
  - Better spares inventory management

**Definition of Terms**:

Planned Preventive Maintenance (PPM)

Planned Preventive Maintenance (PPM) is regular repetitive work done to keep facilities and equipment in good working order and to optimize its efficiency and accuracy. The dates and scope of tasks are defined as Time based maintenance plans or Performance based maintenance plans.

**Inclusion Criteria**: All types of facilities and equipment used in all services of the Facility/Organisation for out-patients and in-patients

**Exclusion Criteria**: NA

**Type of Indicator**: Rate Based Process Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Denominator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers of asset undergone planned preventive maintenance for the month</td>
<td>Numbers of asset scheduled for planned preventive maintenance for the month</td>
</tr>
</tbody>
</table>

Target: 98%

Data Collection: Monthly

Comments/Review: –
### SERVICE STANDARD 03: FACILITY AND BIOMEDICAL EQUIPMENT MANAGEMENT & SAFETY

#### Indicator 02: Percentage of work orders completed on schedule

**Rationale**: This indicator was selected as a generic indicator of the delivery of safe patient care in the hospital because:

- Maintenance and repair work is needed for existing systems and equipment already in place.
- Prompt maintenance of facilities and equipment in a hospital is an important element of Facility Management to provide safe patient care.
- Without regular preventive and corrective maintenance there will be likelihood of increasing demands for high-cost maintenance elements such structural and equipment repairs. Therefore, it is financially advantageous, if not essential, to have a Planned Preventative and repair works implemented to ease out peaks and troughs in the annual maintenance cost cycle of facilities and equipment and ensure safe patient care without interruptions to life saving procedures.

**Definition of Terms**:

1. **Work Order**
   - A means of communication for maintenance, repair and installation needs from approved staff to the Maintenance Department.
   - A work order is a written request that a task or project need to be completed. The order can be sent from a customer to a contractor or vendor. It is also a written order from the customer providing specific or blanket authorization to the contractor to proceed with the performance of a contracted work/project.

2. **Completed on Schedule**:
   - Completed on time - The critical path of a project may change from time to time as activities are completed ahead of or behind schedule. The series of activities that define the total time taken.

**Inclusion Criteria**: All request for repairs for facilities and equipment received and the corresponding number of work orders issued by the maintenance department for each month

**Exclusion Criteria**: NA

**Type of Indicator**: Rate Based Process Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Denominator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers of work orders completed on schedule for the month</td>
<td>Numbers of work orders issued for the month</td>
</tr>
</tbody>
</table>

**Target** : 98%

**Data Collection** : Monthly

**Comments/Review** : –
**SERVICE STANDARD 03: FACILITY AND BIOMEDICAL EQUIPMENT MANAGEMENT & SAFETY**

**Indicator 03 : Percentage of system/service downtime**

**Rationale**: This indicator was selected as a generic indicator of the delivery of safe patient care in the hospital because:

- Prompt maintenance and repair of existing systems, facilities and equipment in a hospital is an important element of Facility Management to provide safe patient care.
- The downtime for maintenance of facilities and equipment should be according to the existing type of systems/services in place in accordance to the contractual agreement without interruptions to life saving procedures.

**Definition of Terms:**

**Downtime**: The term downtime is used to refer to periods when a system is unavailable. Downtime or outage duration refers to a period of time that a system fails to provide or perform its primary function. Reliability, availability, recovery, and unavailability are related concepts. The unavailability is the time-span that a system is unavailable or offline. This is usually a result of the system failing to function because of an unplanned event, or because of routine maintenance (a planned event).

Some facilities measure the downtime incurred during a work shift, or during a 12 or 24 hour period. Another common practice is to identify each downtime event as having an operational, electrical or mechanical origin.

**Inclusion Criteria**: All systems/service/equipment that face downtime and failure to provide its primary function for each month

**Exclusion Criteria**: NA

**Type of Indicator**: Rate Based Process Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Denominator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Numbers of systems/services/equipment in the Facility that faced downtime and rectified for the month</td>
<td>Total numbers of systems/services/equipment in the Facility that faced downtime for the month</td>
</tr>
</tbody>
</table>

**Target**: 5%

**Data Collection**: Monthly

**Comments/Review**: –
**SERVICE STANDARD 03: FACILITY AND BIOMEDICAL EQUIPMENT MANAGEMENT & SAFETY**

**Indicator 04: Response time to equipment failure**

**Rationale**: This indicator was selected as a generic indicator of the delivery of safe patient care in the hospital because:

- Prompt repairs of existing systems, facilities and equipment in a hospital is an important element of Facility Management to provide safe patient care.
- The response time for equipment failure should be prompt to the type of service areas e.g. critical care and others without interruptions to life saving procedures.

**Definition of Terms:**

**Response Time to Equipment Failure:**

The response time to equipment failure is the measure of the duration between the call received from the client to the Maintenance Department and when the technician arrives to the individual location site. The response time is dependent on the urgency of the equipment, the type of service area and impact on patient safety. Standards are usually set by the organization on the tolerance time e.g Critical care equipment – 15 minutes, Others equipment – 30 minutes)

**Inclusion Criteria**: All calls received from individual service areas of the Facility on complaints of equipment failure and the corresponding response time for each event in the month

**Exclusion Criteria**: NA

**Type of Indicator**: Response time

### Critical Care

**Numerator**: Total cumulative number of minutes taken for response time for all incidents of equipment failure from critical care areas of the Facility for the month

**Denominator**: Total numbers of calls received from critical care areas of the Facility on equipment failure for the month

### Other Service Areas

**Numerator**: Total cumulative number of minutes taken for response time for all incidents of equipment failure from other service areas of the Facility for the month

**Denominator**: Total numbers of calls received from other service areas of the Facility on equipment failure for the month

**Target**: Critical Care equipment – 15 minutes, Others equipment – 30 minutes

**Data Collection**: Monthly

**Comments/Review**: –
SERVICE STANDARD 04: NURSING SERVICES

There is tracking and trending of specific performance indicators not limited to but at least two (2) of the following:

<table>
<thead>
<tr>
<th>No</th>
<th>INDICATOR</th>
<th>TARGET</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Percentage of intravenous (I/V) line complications (needles out, redness of skin, infection sites, extravasation)</td>
<td>≤ 0.5%</td>
<td>Monthly</td>
</tr>
<tr>
<td>2.</td>
<td>Percentage of pressure sore among bedridden patients</td>
<td>Downward Trend</td>
<td>Monthly</td>
</tr>
<tr>
<td>3.</td>
<td>Rate of patient falls</td>
<td>Downward Trend</td>
<td>Monthly</td>
</tr>
</tbody>
</table>
**SERVICE STANDARD 04: NURSING SERVICES**

**Indicator 01**: Percentage of intravenous (I/V) line complications (needles out, redness of skin, infection of sites, extravasation)

**Rationale**: This indicator was selected because:

- This indicator looks at patient safety and staff competency in the Nursing Service. It is a proxy indicator that reflects the quality of nursing care provided for in-patients.

- Intravenous line complications have a direct impact on patient safety as it can cause discomfort, pain and prolong inpatient stay that may lead to the patient suffering from economic consequences.

**Definition of Terms**:

1. **Intravenous line complications** include infection of site, extravasation and needles being out.

2. **Infection of intravenous site** is characterised by pain, tenderness, warmth, localised swelling and redness at or around the intravenous insertion site and causing reduced mobility of the extremities.

3. **Extravasation** is the accidental administration of intravenously (IV) infused medications into the extravascular space/tissue around infusion sites characterized by swelling and redness around the site.

**Inclusion Criteria**: All in-patients who have received intravenous therapy during his/her current hospital stay is observed until discharge.

**Exclusion Criteria**:

1. Complication that has been counted in previous admission
2. Psychiatry patient
3. Neonates patient
4. Paediatric patient

**Type of Indicator**: Rate Based Process Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Total number of incidences of (I/V) line site complications among in-patients during the study period X 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Total number of intravenous (I/V) lines set up during the study period</td>
</tr>
</tbody>
</table>

**Target**: ≤ 0.5%

**Data Collection**: Monthly

**Comments/Review**: –
SERVICE STANDARD 04: NURSING SERVICES

Indicator 02 : Percentage of pressure sore among bed ridden patients

Rationale : This indicator was selected because:

- Pressure ulcers/sores result in patient discomfort, increased length of stay, morbidity and mortality.
- This is a proxy indicator that reflects patient safety and the quality of nursing care.

Definition of Terms :

1. Pressure Ulcer/Sore:
Pressure ulcer/sore is defined as a localized injury to the skin and/or underlying tissue usually over the bony prominence as a result of pressure or pressure in combination with shear and/or friction. It is a circumscribed area in which cutaneous tissue has been destroyed and there is progressive destruction of underlying tissue caused by interference with circulation and nutrition to the area. Signs include blister or broken skin or sore formation over pressure areas (redness is excluded).

2. Non-ambulant patients/bed-ridden
Bed-ridden patients who are unable to carry out activities of daily living e.g. feed themselves, bathe, move or void themselves. All patients admitted shall have an initial assessment process where nursing needs are identified including prevention of pressure sores for non-ambulant patients

Inclusion Criteria : All bed ridden non-ambulant in-patients who develop pressure sores during their stay in hospital (including those with pre-admission pressure sores which have worsened or developed new pressure sores in other sites).

Exclusion Criteria : All patients admitted with pre-admission pressure sores present which have become better.

Type of Indicator : Rate Based Process Indicator

Numerator : Number of non-ambulant patients who developed new pressure ulcers (including those with pre-admission pressure sores which have worsened) during their stay in the hospital/ward in the month

Denominator : Total number of non-ambulant patients admitted to the hospital/ward in the month

Target : Downward trend
Data Collection : Monthly
Comments/Review : _

X 100%
SERVICE STANDARD 04: NURSING SERVICES

Indicator 03 : Rate of Patient Falls

Rationale : This indicator was selected because:

- Globally, falls are a major public health problem. While all people who fall are at risk of injury, the age, gender and health of the individual can affect the type and severity of injury.
- This indicator is a tracer marker that measures patient safety
- Fall prevention strategies should be comprehensive and multifaceted. They should support policies that create safer environments and reduce risk factors.

Definition of Term :

Patient Falls:

A fall is defined as an event which results in a person coming to rest inadvertently on the ground or floor or other lower level. Fall-related injuries may be fatal or non-fatal, though most are non-fatal.

Falls are the second leading cause of accidental or unintentional injury deaths worldwide. Older people have the highest risk of death or serious injury arising from a fall and the risk increases with age. Another high risk group is children.

(Source: WHO)

Inclusion Criteria : All adult patients admitted and had a fall/falls during his/her stay in the hospital shall be included

Exclusion Criteria : Falls among children (paediatric patients)

Type of Indicator : Rate Based Outcome Indicator

Numerator : Total number of patient falls reported during their stay in the hospital/ward in the month

Denominator : Total number of patients admitted in the same month X 100

Target : Downward trend

Data Collection : Monthly

Comments/Review : -
**SERVICE STANDARD 05: PREVENTION AND CONTROL OF INFECTION**

There is tracking and trending of specific performance indicators not limited to but at least two (2) of the following:

<table>
<thead>
<tr>
<th>No</th>
<th>INDICATOR</th>
<th>TARGET</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Percentage of staff trained in Prevention and Control of Infection Practices</td>
<td>100% new staff 85% existing staff</td>
<td>Monthly</td>
</tr>
<tr>
<td>2.</td>
<td>Percentage of Healthcare Associated Infections (HCAI)</td>
<td>&lt; 5%</td>
<td>Monthly</td>
</tr>
<tr>
<td>3.</td>
<td>Number of Resistant Organisms to Antibiotics within a specified period of time</td>
<td>MRSA 0.3% ESBL 0.3%</td>
<td>Monthly</td>
</tr>
</tbody>
</table>
### SERVICE STANDARD 05: PREVENTION AND CONTROL OF INFECTION

#### Indicator 01: Percentage of staff trained in Prevention and Control of Infection Practices

**Rationale** : This indicator was selected to reflect the delivery of safe patient care in hospitals because:

- Healthcare Associated Infection (HAI) is a significant problem in hospitals and has an impact on the safety of patient, staff and visitor.

- The Hospital Infection and Antibiotic Control Committee (HIACC) must undertake intense training of all staff including staff of contracted services to ensure the effectiveness of the hospital’s Prevention and Control of Infection programme. It should be compulsory rather than optional training for all relevant staff.

**Definition of Term:**

**Training in Infection Control:**

Training on Infection Control can be defined as specific training on aspects of prevention and control of infection that includes in-house training, orientation programme, conference, seminar and formal training i.e. Asia Pacific Society for Infection Control (APSIC), post basic training (6 months) in Infection Control and post graduate training.

**Inclusion Criteria** :

All staff including specialists, medical officers, house officers, nursing staff and students (undergraduate medical students, postgraduate medical students, student nurses and allied health staff) and staff of the privatised services (housekeeping, linen service, Facility and Biomedical equipment maintenance services) should be given training on infection control based on their scope of services and job description.

**Exclusion Criteria** : NA

**Type of Indicator** : Rate Based Process Indicator

**Numerator** :

Total number of existing staff in the facility (all categories including all on site out sourced service providers) who have been given training in prevention and control of infection X 100%

**Denominator** :

Total number of existing staff in the facility (all categories including all on site out sourced service providers) at a given point of time.

**Target** :

100% - Infection Control Nurse, 100% - new staff and 85% - existing staff (including re-training)

**Data Collection** :

Monthly

**Comments/Review** :

-
### SERVICE STANDARD 05: PREVENTION AND CONTROL OF INFECTION

**Indicator 02 : Percentage of Healthcare Associated Infections (HCAI)**

**Rationale** : This indicator was selected to reflect the delivery of safe patient care in hospitals because:

- Healthcare Associated Infections are preventable illnesses and the prevention of these infections continues to be top priority. Therefore, periodic surveillance is essential to assess the effectiveness of the infection control programme in the hospital setting.
- Healthcare Associated Infection (HAI) is a significant potential problem in hospitals and has an important impact on the safety of patient, staff and visitor.
- The Hospital Infection and Antibiotic Control Committee (HIACC) must undertake intense surveillance of the incidence of HAI including incidence of sentinel organisms such as MRSA, which is a proxy indicator on the effectiveness of the hospital's Prevention and Control of Infection programme.

**Definition of Term:**

**Hospital Acquired Infection (HAI)**

Healthcare Associated Infection: An infection occurring in a patient in a hospital or other healthcare facility in whom the infection was not present or incubating at the time of admission. This includes the infections acquired in the hospital, but appearing after discharge, and also occupational infections among staff of the facility.

(Ref: Technical Specifications (HPIA) Version 4.0, Ministry of Health, Malaysia)

The diagnosis of a nosocomial infection is based on a combination of clinical and laboratory findings.

**Inclusion Criteria** : All patients who were admitted to the ward before or at 8.00 am and were not yet discharged at time of the survey.

**Exclusion Criteria** : Cases admitted to the hospital with pre-admission HAI (infected during stay at another healthcare facility) and patients admitted in the Psychiatric ward, Emergency Department, Labour/Delivery ward, Out-Patient Department and Day Care.

**Type of Indicator** : Rate Based Process Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of patients with Healthcare Associated Infection (HCAI) in the hospital on the day of survey</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Number of hospitalised patients in the hospital on the day of survey X 100%</td>
</tr>
</tbody>
</table>

**Target** : < 5%

**Data Collection** : 6 Monthly- Hospital wide cross sectional point prevalence survey, collected twice a year (one day in month of March & September)

**Comments/Review** : (Ref: Technical Specifications (HPIA) Version 4.0, Ministry of Health, Malaysia)
SERVICE STANDARD 05: PREVENTION AND CONTROL OF INFECTION

Indicator 03: Number of Resistant Organisms to Antibiotics within a specified period of time

**Rationale:** This indicator was selected to reflect the delivery of safe patient care in hospitals because:

- One of the major issues in our health care today is that of controlling the increase in antimicrobial resistance. Although multiple factors play a role in this problem, the selective pressures of inappropriate and widespread use of antimicrobials are considered as major contributors.
- Monitoring antimicrobial use or antimicrobial surveillance will serve as a tool for:
  - Comparison in antimicrobial use by having national benchmark data (aggregated from all hospitals);
  - Identifying and developing strategies to improve antimicrobial control through multi-disciplinary efforts involving Infectious Disease Physicians/Clinicians, Clinical Microbiologist/ Microbiologist, Pharmacist and Infection Control Nurses.


- The Hospital Infection and Antibiotic Control Committee must undertake studies on the presence of resistant organisms to antibiotics and develop a hospital specific policy on the Use of antibiotics.
- Monitoring the magnitude of the presence of resistant organisms to antibiotics is an indicator of the effectiveness of the hospital’s policy on the use of antibiotics and the Prevention and Control of Infection Programme.

**Definition of Term:**

**Drug-Resistant Organisms**

Drug-Resistant Organisms (DROs) are bacteria and other organisms that have developed a resistance to certain drugs. In other words, a particular drug is no longer able to kill or control a specific bacteria or organism. Other terms used to describe this situation include antibiotic resistance, antibacterial resistance, and antimicrobial resistance. Examples of drug-resistant organisms include:

1. **MRSA** - methicillin/oxacillin-resistant *Staphylococcus aureus*
2. **VRE** - vanomycin-resistant enterococci
3. **ESBLs** - extended-spectrum beta lactamases (resistant to cephalosporins and monobactams)
4. **PRSP** - penicillin-resistant *Streptococcus pneumoniae*
5. **GISA** - glycopeptide-intermediate *Staphylococcus aureus*
6. **VISA** - vancomycin-intermediate *Staphylococcus aureus*
7. **VSRA** - vancomycin-resistant *Staphylococcus aureus* (not yet found in nature, but it is believed it will emerge or evolve from VISA), and
8. **MDR-TB** - multidrug-resistant tuberculosis.

**Inclusion Criteria:** The number of patients admitted to the hospital and had developed resistance To antibiotics

**Exclusion Criteria:** Pre-existing infection prior to admission

**Type of Indicator:** Sentinel Event

**Numerator:** Number of patients developing resistance to antibiotics within a specified period of time

**Target:** MRSA 0.3%, ESBL producers 0.3%, Multi-resistant organisms, Carbapenem-resistant Enterobacteriaceae (CRE), vancomycin-resistant enterococci (VRE)

**Data Collection:** Monthly

**Comments/Review:** -
## SERVICE STANDARD 07: HEALTH INFORMATION MANAGEMENT SYSTEM

There is tracking and trending of specific performance indicators which include but not limited to at least two (2) of the following:

<table>
<thead>
<tr>
<th>No</th>
<th>INDICATOR</th>
<th>TARGET</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Percentage of Medical Reports prepared within the stipulated period</td>
<td>Secondary and Tertiary Care (Public &amp; Private) Facility: ≤ 4 weeks</td>
<td>Monthly</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Primary Care Facility: ≤ 2 weeks</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Percentage of Case Summaries that were completed within 72 working hours of discharge</td>
<td>100%</td>
<td>Monthly</td>
</tr>
</tbody>
</table>
SERVICE STANDARD 07: HEALTH INFORMATION MANAGEMENT SYSTEM

Indicator 01: Percentage of Medical Reports prepared within the stipulated period

Rationale: This indicator was selected because:
- There is a need to hasten the preparation of medical reports in order to satisfy our customers especially for their insurance claims, police investigations, court proceedings etc.
- Timeliness of preparation of medical reports is an indication of the efficiency of the Health Information Management Services

Definition of Terms:

1. Medical Reports:
   Written report of the results of a medical examination of a patient describing the findings during hospitalization, diagnosis and treatment and any other information on the progress, and events that happened to the individual patient during hospitalization and subsequent follow up.

2. Stipulated Period:
   The preparation of completed requests for medical report must meet the following norms:
   - Secondary and Tertiary Care (Public & Private) Hospitals: ≤ 4 weeks
   - Primary Care Facility: ≤ 2 weeks
   The period of preparing completed requests for medical reports is to be calculated exclusive of public holidays.

Inclusion Criteria:
- Plain medical reports
- Report for Insurance claims

Exclusion Criteria: NA

Type of Indicator: Rate Based Process Indicator

Numerator: Number of Medical Reports completed within the stipulated period in the month
Denominator: Total number of requests for Medical Reports in the month \( \times 100\% \)

Target:
1. Secondary and Tertiary Care (Public & Private) Hospitals: ≤ 4 weeks
2. Primary Care Facility: ≤ 2 weeks

Data Collection: Monthly
Comments/Review: -
SERVICE STANDARD 07: HEALTH INFORMATION MANAGEMENT SYSTEM

Indicator 02: Percentage of case summaries that were completed within 72 working hours of discharge

Rationale: This indicator was selected because:
- There is a need to hasten the preparation of case summaries for continuity of care.
- Timeliness of preparation of case summaries is an indication of the timely access to records for continuity of care.

Definition of Terms:

Case Summary:

Patient Case Summary is a standardized set of basic medical data that includes the most important clinical facts required to ensure safe and secure healthcare. This summarized version of the patient’s medical data gives health professionals the essential information they need to provide care in the case of an unexpected or unscheduled medical situation (e.g. emergency or accident). Though this data is mainly intended to aid health professionals in providing unscheduled care, it can also be used to provide planned medical care/continuity of care (e.g. in the case of citizen movements or cross-organizational care paths). The completion of case summaries must meet the following:

- Within 72 hours of discharge: ≥ 72 working hours after the patient is discharged.
- The period of completing case summaries is to be calculated exclusive of public holidays.

Inclusion Criteria: All cases discharged in a given month

Exclusion Criteria: NA

Type of Indicator: Rate Based Process Indicator

Numerator: Number of case summaries completed within 72 working hours of discharge in a month X 100%

Denominator: Total number of patients discharged in a month

Target: 100%

Data Collection: Monthly

Comments/Review: -
## SERVICE STANDARD 08: EMERGENCY SERVICES

There is tracking and trending of specific performance indicators not limited to but at least two (2) of the following including the mandatory indicator:

<table>
<thead>
<tr>
<th>No</th>
<th>INDICATOR</th>
<th>TARGET</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Mandatory: Percentage of inappropriate triaging (under triaging): Category Green patients who should have been triaged as Category Red.</td>
<td>(Target: ≤ 0.5%)</td>
<td>Monthly</td>
</tr>
<tr>
<td>2.</td>
<td>Waiting time relative to Triage Category:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>i) Malaysian Triage Category (MTC) Red seen immediately</td>
<td>100%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ii) Malaysian Triage Category (MTC) Yellow seen within 30 minutes</td>
<td>≥85%</td>
<td></td>
</tr>
<tr>
<td></td>
<td>iii) Malaysian Triage Category (MTC) Green seen within 90 minutes</td>
<td>&gt; 70%</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Unplanned return of patient seen at Emergency Department within 24 hours for similar complaint</td>
<td>3%</td>
<td>Monthly</td>
</tr>
</tbody>
</table>
**SERVICE STANDARD 08: EMERGENCY SERVICES**

**Indicator 01**: Percentage of inappropriate triaging (under triaging): Category Green patients who should have been triaged as Category Red

**Rationale**: This indicator was selected because:

- Triage is an essential function of the Emergency Departments (EDs), whereby many patients may present multiple ill conditions simultaneously. Triage aims to ensure that patients are treated in the order of their clinical urgency and that treatment is appropriate. Triage also allows for the allocation of the patient to the most appropriate access, assessment and treatment area.

- It is a scale for rating clinical urgency. The scale directly relates triage category with a range or outcome measures (inpatient length of stay, ICU admission, mortality rate) and resource consumption (staff time, cost).

- Studies have shown that the “under triaging” of critically ill patients can increase their morbidity and mortality due to delay in their resuscitation and the provision of definitive care. Urgency refers to the need for time-critical intervention.

- This indicator measures the accuracy and appropriateness of the Triaging System in the Emergency Department (ED) to ensure that critically ill patients are not missed and categorized as “non-critical”.

(Ref: Technical Specifications (KPI) Clinical Services, Medical Programme Version 04, Ministry of Health Malaysia, 2016)

**Definition of Terms**:

- **Under-triaged**: Critically ill patient (MTC RED) who was triaged as non-critical patient (MTC GREEN)

- **Inclusion Criteria**: All patients who were triaged under the Green Zone

- **Exclusion Criteria**: Period of time when the hospital is unable to function as usual due to mass casualty/disaster/crisis

- **Type of Indicator**: Rate Based Process indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of MTC GREEN patients who should have been triaged as MTC RED</th>
<th>X 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Total number of MTC GREEN patients</td>
<td></td>
</tr>
<tr>
<td><strong>Target</strong></td>
<td>≤ 0.5%</td>
<td></td>
</tr>
<tr>
<td><strong>Data Collection</strong></td>
<td>Monthly</td>
<td></td>
</tr>
<tr>
<td><strong>Comments/Review</strong></td>
<td>(Ref: Technical Specifications (KPI) Clinical Services, Medical Programme Version 4.0, Ministry of Health, Malaysia, 2016)</td>
<td></td>
</tr>
</tbody>
</table>
**SERVICE STANDARD 08: EMERGENCY SERVICES**

**Indicator 02:**

i) Waiting time relative to triage category: Malaysian Triage Category (MTC) Red seen immediately (100%)

ii) Waiting time relative to triage category: Malaysian Triage Category (MTC) Yellow seen within 30 minutes (≥ 85%)

iii) Waiting time relative to triage category: Malaysian Triage Category (MTC) Green seen within 90 minutes (> 70%)

**Rationale:** This indicator was selected because:

- Waiting time relative to triage category is the clinical performance indicator for the Emergency Department
- Triage is an essential function in the Emergency Department where many patients may present simultaneously.
- Triage aims to ensure that patients are treated in the order of their clinical urgency and that their treatment is appropriately timely. It also allows for allocation of the patient to the most appropriate assessment and treatment area.
- This indicator measures the time taken for the patient to be seen by the medical officer at the Emergency Department (from the time of his/her registration) based on the relevant waiting times of the Malaysian Triage Category (MTC).

**Definition of Terms:**

1. **Patients in MTC Red seen Immediately:** Initiation of assessment and/or treatment within 5 minutes as (defined in MTC)

   **Exclusion Criteria:**
   - During Mass Casualty Incident as defined by local Disaster Action Plan
   - Patients retriaged from green/ yellow

2. **Patients in MTC Yellow seen within 30 minutes:** Initiation of assessment and/or treatment within 30 minutes

   **Exclusion Criteria:**
   - During Mass Casualty Incident as defined by local Disaster Action Plan
   - Patients retriaged from green/ yellow

3. **Patients in Green seen within 90 minutes:** Initiation of assessment and/or treatment within 90 minutes as defined in MTC.

   **Exclusion Criteria:**
   - Non-emergency cases: G4 (OPD cold cases seen at Emergency Department as defined in MTC.
   - Klinik Rawatan Pesakit Selepas Waktu Pejabat (in Ministry of Health Hospitals)

4. **Emergency Department (ED) staff:**

   - Hospital with resident Emergency Physician, Medical officers/House officers, paramedics
   - Hospital without resident Emergency Physician: Medical officers, Paramedics

**Type of Indicator:**  **Waiting Time**
### Malaysian Triage Category (MTC) - RED

**Numerator**: The number of patients allocated MTC Red who are attended by ED staff IMMEDIATELY

**Denominator**: The total number of patients attending ED who are triaged to MTC Red in the time period under study.

**Target**: 100%

**Data Collection**: Monthly

**Comments/Review**: X 100%

### Malaysian Triage Category (MTC) - YELLOW

**Numerator**: The number of patients allocated MTC Yellow who are attended by ED Staff within 30 minutes

**Denominator**: The total number of patients attending ED who are triaged to MTC Yellow in the time period under study.

**Target**: ≥ 85%

**Data Collection**: Monthly

**Comments/Review**: X 100%

### Malaysian Triage Category (MTC) - GREEN

**Numerator**: The number of patients allocated MTC Green who are attended by ED Staff within ≥ 90 minutes

**Denominator**: The total number of patients attending ED who are triaged to MTC Green in the time period under study.

**Target**: > 70%

**Data Collection**: Monthly

### SERVICE STANDARD 08: EMERGENCY SERVICES

**Indicator 03**: Unplanned return of patient seen at Emergency Department within 24 hours for a similar complaint

**Rationale**: This indicator was selected because:

- It is a proxy indicator on safety and effectiveness of care in the Emergency Department.
- This indicator measures the quality of care provided to patient attending the Emergency Department, it acts as a check and balance to ensure that the patients attending the Emergency Department do not receive sub-optimal care.
- Patients who are well managed should not be subject to unplanned return this early within 24 hours for similar complaint.

**Definition of Terms**:

**Unplanned return**: Return to the Emergency Department that was unplanned for similar complaint after the initial treatment.

**Inclusion Criteria**: All cases seen at the Emergency Department and returns within 24 hours for the same complaint

**Exclusion Criteria**: Planned return for follow up for the same complaint

**Type of Indicator**: Rate Based Process Indicator

| Numerator                          | Number of unplanned return of patients seen at the Emergency Department within 24 hours for similar complaint in the month |
|------------------------------------|----------------------------------------------------------------------------------------------------------------|---|
| Denominator                        | Total number of patients seen at the Emergency Department in the month                                            |---|

**Target**: 3%

**Data Collection**: Monthly

**Comments/Review**: 

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*Malaysian Society for Quality in Health*
### SERVICE STANDARD 09: CLINICAL SERVICES (NON-SPECIALIST FACILITY)

There tracking and trending of specific performance indicators which include but not limited to at least two(2) of the following indicators:

<table>
<thead>
<tr>
<th>No</th>
<th>INDICATOR</th>
<th>TARGET</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Number of Mortality/Morbidity audits/meetings being conducted in the department with documentation of cases discussed</td>
<td></td>
<td>6 Monthly</td>
</tr>
<tr>
<td>2.</td>
<td>Percentage of unplanned re-admission within 72 hours of discharge</td>
<td></td>
<td>Monthly</td>
</tr>
<tr>
<td>3.</td>
<td>Case fatality rate for two diseases (Facility to decide based on local disease prevalence i.e. 2 top causes of admission within the service/discipline)</td>
<td></td>
<td>Monthly</td>
</tr>
<tr>
<td>4.</td>
<td>Percentage of paediatric patients with dengue fever diagnosed within 24 hours of admission</td>
<td></td>
<td>Monthly</td>
</tr>
</tbody>
</table>
**SERVICE STANDARD 09: CLINICAL SERVICES (NON-SPECIALIST FACILITY)**

<table>
<thead>
<tr>
<th>Indicator 01: Number of Mortality and Morbidity audits/meetings being conducted in the department with documentation of cases discussed</th>
</tr>
</thead>
</table>

**Rationale**: This indicator was selected because:

- The main purpose of the mortality and morbidity meetings is to improve patient management and quality of care. Regular mortality and morbidity meetings serve to look at the weakness and the shortfalls in the overall management of patients, hence it will be learnt and the same mistake could be prevented and would not be repeated in the future.

**Definition of Terms:**

- **Morbidity**: A diseased state
- **Mortality**: The quality or state of being mortal
- **Morbidity Audits/Meetings**: Discussion of case management in regards to patient morbidity, incidence reporting, issue of patient safety, clinical audit (at the hospital level).
- **Mortality Meeting**: Discussions related to the management of the case and cause of death of the patient. (eg: Clinical audit, POMR, MMR, Dengue Mortality, TB Mortality, Mortality under 5 years of age (MDG5), Perinatal Mortality Reviews(MDG4) Inquiries ) at hospital level.
- **Documentation**: Official minutes or notes taken during the meeting with attendance list(certified by the Hospital Director/ Person-In Charge (PIC))
- **Inclusion Criteria**: All Morbidity and /or Mortality meetings being conducted at the hospital level.
- **Exclusion Criteria**: Time period when the hospital was unable to function as usual due to mass casualty/disaster/crisis
- **Type of Indicator**: This is a Process indicator

**Numerator**: Number of documented mortality and morbidity meetings that were conducted in six (6) months

**Target**

**Data Collection**: 6 Monthly

**Comments/Review**: 
### SERVICE STANDARD 09: CLINICAL SERVICES (NON-SPECIALIST FACILITY)

<table>
<thead>
<tr>
<th>Indicator 02: Percentage of unplanned re-admission within 72 hours of discharge</th>
</tr>
</thead>
</table>

**Rationale**: This indicator was selected because:

- Unplanned re-admissions is often considered to be the result of suboptimal care in the previous admission leading to re-admission.
- Patients receiving good quality clinical services should not be subjected to unplanned re-admissions within 72 hours of discharge.

**Definition of Terms:**

1. **Unplanned re-admission**: Patient being re-admitted for the management of the same clinical condition he or she was discharged with and the admission was not scheduled. (The same patient readmitted in the same unit/hospital ≤ 72 hours of previous discharge)

2. **Same condition**: Same diagnosis as referred to the ICD 10

**Comments**: Number of readmission of one patient is considered as one case. Those on home leave or transferred to other unit is not considered as discharge

**Inclusion Criteria**: Re-admission with similar conditions (primary diagnosis) within 72 hours of discharge

**Exclusion Criteria**: At Own Risk (AOR) discharge patients during first admission

**Type of Indicator**: Rate Based Process Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of patients with unplanned re-admission to the ward within 72 hours of discharge</th>
<th>X 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Total number of patients discharged during the same period of time the numerator data was collected</td>
<td></td>
</tr>
</tbody>
</table>

**Target**:  
**Data Collection**: Monthly

**Comments/Review**: 

**SERVICE STANDARD 09: CLINICAL SERVICES (NON-SPECIALIST FACILITY)**

<table>
<thead>
<tr>
<th>Indicator 04</th>
<th>Percentage of Paediatric Patients with dengue fever diagnosed within 24 hours of admission</th>
</tr>
</thead>
</table>

**Rationale**: This indicator was selected because:

- Dengue fever has now become endemic in Malaysia and is a potentially fatal condition whose severity and frequency may be decreased by careful management planning. This indicator is a measure of the OUTCOME of care of patients with dengue.

- The outcome of children with this condition is expected to be good with early diagnosis and compliance to standard protocols.

- This indicator measures the clinical effectiveness of management of dengue fever (both haemorrhage and non-haemorrhage).

**Definition of Terms:**

**Dengue:**

Dengue Fever (DF) and Dengue Hemorrhagic Fever (DHF)
This is a clinical diagnosis decided by the doctor based on clinical findings as well as the relevant investigations.

**Inclusion Criteria**: All cases of dengue fever admitted in the paediatric ward during the study period

**Exclusion Criteria**: NA

**Type of Indicator**: Rate Based Process Indicator

**Numerator**: Number of (DF & DHF/DSS) cases diagnosed within 24 hours of admission during the study period $\times 100$

**Denominator**: Total number of (DF & DHF) cases admitted during the study period

**Target**

**Data Collection**: Monthly

**Comments/Review**: 

---

**Malaysian Society for Quality in Health**

*Performance Indicators - MSQH Hospital Accreditation Standards 5th Edition*
There is tracking and trending of specific performance indicators which include but not limited to at least two (2) of the following:

<table>
<thead>
<tr>
<th>No</th>
<th>INDICATOR</th>
<th>TARGET</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Number of Mortality/Morbidity audits/meetings being conducted in the department with documentation of cases discussed</td>
<td></td>
<td>6 Monthly</td>
</tr>
<tr>
<td>2.</td>
<td>Percentage of unplanned re-admission within 72 hours of discharge</td>
<td></td>
<td>Monthly</td>
</tr>
<tr>
<td>3.</td>
<td>Dengue Case Fatality Rate</td>
<td></td>
<td>Monthly</td>
</tr>
</tbody>
</table>
SERVICE STANDARD 09A: CLINICAL SERVICES (MEDICAL RELATED SERVICES)

**Indicator 01**: Number of mortality and morbidity audits/meetings being conducted in the department with documentation of cases discussed

**Rationale**: This indicator was selected because:

- The main purpose of the mortality and morbidity meetings is to improve patient management and quality of care. Regular mortality and morbidity meetings serve to look at the weakness and the shortfalls in the overall management of patients, hence it will be learnt and the same mistake could be prevented and would not be repeated in the future.

**Definition of Terms**:

- **Morbidity**: A diseased state
- **Mortality**: The quality or state of being mortal
- **Morbidity Audits/Meetings**: Discussion of case management in regards to patient morbidity, incidence reporting, issue of patient safety, clinical audit (at the hospital level).
- **Mortality Meeting**: Discussions related to the management of the case and cause of death of the patient. (eg: Clinical audit, POMR, MMR, Dengue Mortality, TB Mortality, Mortality under 5 years of age (MDG5), Perinatal Mortality Reviews(MDG4) Inquiries ) at hospital level.
- **Documentation**: Official minutes or notes taken during the meeting with attendance list(certified by the Hospital Director/ Person-In Charge (PIC))

**Inclusion Criteria**: All Morbidity and/or Mortality meetings being conducted at the hospital level.

**Exclusion Criteria**: Time period when the hospital was unable to function as usual due to mass casualty/disaster/crisis

**Type of Indicator**: This is a Process Indicator

**Numerator**: Number of documented mortality and morbidity meetings that were conducted in six (6) months

**Target**: Data Collection: 6 Monthly

**Comments/Review**: 

---

---
## SERVICE STANDARD 09A: CLINICAL SERVICES (MEDICAL RELATED SERVICES)

<table>
<thead>
<tr>
<th>Indicator 02 : Percentage of unplanned re-admission within 72 hours of discharge</th>
</tr>
</thead>
</table>

### Rationale
This indicator was selected because:

- Unplanned re-admissions is often considered to be the result of suboptimal care in the previous admission leading to re-admission.
- Patients receiving good quality clinical services should not be subjected to unplanned re-admissions within 72 hours of discharge.

### Definition of Terms:

**Unplanned re-admission:**

Patient being re-admitted for the management of the same clinical condition he or she was discharged with and the admission was not scheduled. (The same patient readmitted in the same unit/hospital ≤ 72 hours of previous discharge)

**Same condition:**
Same diagnosis as referred to the ICD 10

### Comments:

Number of readmission of one patient is considered as one case. Those on home leave or transferred to other unit is not considered as discharge.

- **Inclusion Criteria:** Re-admission with similar conditions (primary diagnosis) within 72 hours of discharge
- **Exclusion Criteria:** At Own Risk (AOR) discharge patients during first admission
- **Type of Indicator:** Rate Based Process Indicator

<table>
<thead>
<tr>
<th>Numerator : Number of patients with unplanned re-admission to the ward within 72 hours of discharge</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator : Total number of patients discharged during the same period of time the numerator data was collected</td>
</tr>
</tbody>
</table>

### Target
- Data Collection : Monthly
- Comments/Review :
**SERVICE STANDARD 09A: CLINICAL SERVICES (MEDICAL RELATED SERVICES)**

**Indicator 03 : Dengue Case Fatality Rate**

**Rationale :** This indicator was selected because:

- Dengue fever has now become endemic in Malaysia and is a potentially fatal condition whose severity and frequency may be decreased by careful management planning. This indicator is a measure of the OUTCOME of care of patients with dengue.

- This indicator measures the clinical effectiveness of management of dengue fever (both haemorrhage and non-haemorrhage).

**Definition of Terms:**

**Dengue:** Dengue Fever (DF) and Dengue Hemorrhagic Fever (DHF)

This is a clinical diagnosis decided by the doctor based on clinical findings as well as the relevant investigations.

**Remarks**

(a) The 2nd Revision of the Malaysian CPG on the Management of Dengue Infection in Adults 2009 strongly recommends the monitoring of Dengue CFR and DHF Fatality rate

(b) According to the said CPG, all dengue deaths should be audited at individual hospital/state/national level

**Inclusion Criteria :** All deaths caused by dengue fever

**Exclusion Criteria :** Deaths caused by other causes

**Type of Indicator :** Rate Based Output Indicator

<table>
<thead>
<tr>
<th>Numerator :</th>
<th>Number of cases admitted with DF &amp; DHF/DSS and died from DF &amp; DHF/DSS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator :</td>
<td>Total number of (DF &amp; DHF) CASES admitted X100%</td>
</tr>
</tbody>
</table>

**Target**

**Data Collection :** Monthly

**Comments/Review :**
### SERVICE STANDARD 09B: CLINICAL SERVICES (SURGICAL RELATED SERVICES)

There is tracking and trending of specific performance indicators which include but not limited to at least two (2) of the following:

<table>
<thead>
<tr>
<th>No</th>
<th>INDICATOR</th>
<th>TARGET</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Number of Mortality/Morbidity audits/meetings being conducted in the department with documentation of cases discussed</td>
<td></td>
<td>6 Monthly</td>
</tr>
<tr>
<td>2.</td>
<td>Percentage of unplanned re-admission within 72 hours of discharge</td>
<td></td>
<td>Monthly</td>
</tr>
<tr>
<td>3.</td>
<td>Unplanned return to Operating Theatre within the same hospital admission following surgery</td>
<td></td>
<td>Monthly</td>
</tr>
<tr>
<td>4.</td>
<td>Percentage of patients with waiting time of more than seven (7) working days for fixation of long bone closed fracture</td>
<td></td>
<td>Monthly</td>
</tr>
<tr>
<td>5.</td>
<td>Subspecialties units in the Surgical Services, e.g. Orthopaedics, Otorhinolaryngology, Ophthalmology, Neurosurgery, etc shall monitor any other two (2) indicators to support its goals and objectives.</td>
<td></td>
<td>–</td>
</tr>
</tbody>
</table>
### SERVICE STANDARD 09B: CLINICAL SERVICES (SURGICAL RELATED SERVICES)

#### Indicator 01: Number of mortality and morbidity audits/meetings being conducted in the department with documentation of cases discussed

**Rationale:** This indicator was selected because:

- The main purpose of the mortality and morbidity meetings is to improve patient management and quality of care. Regular mortality and morbidity meetings serve to look at the weakness and the shortfalls in the overall management of patients, hence it will be learnt and the same mistake could be prevented and would not be repeated in the future.

**Definition of Terms:**

- **Morbidity:** A diseased state
- **Mortality:** The quality or state of being mortal
- **Morbidity Audits/Meetings:** Discussion of case management in regards to patient morbidity, incidence reporting, issue of patient safety, clinical audit (at the hospital level).
- **Mortality Meeting:** Discussions related to the management of the case and cause of death of the patient. (eg: Clinical audit, POMR, MMR, Dengue Mortality, TB Mortality, Mortality under 5 years of age (MDG5), Perinatal Mortality Reviews(MDG4) Inquiries ) at hospital level.

**Documentation:**

Official minutes or notes taken during the meeting with attendance list(certified by the Hospital Director/ Person-In Charge (PIC))

**Inclusion Criteria**

- All Morbidity and/or Mortality meetings being conducted at the hospital level.

**Exclusion Criteria**

- Time period when the hospital was unable to function as usual due to mass casualty/disaster/crisis

**Type of Indicator**

- This is a Process Indicator

**Numerator**

- Number of documented mortality and morbidity meetings that were conducted in six (6) months

**Target**

**Data Collection**

- 6 Monthly

**Comments/Review**

<table>
<thead>
<tr>
<th>\</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Numerator</strong></td>
<td>Number of documented mortality and morbidity meetings that were conducted in six (6) months</td>
</tr>
<tr>
<td><strong>Target</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Data Collection</strong></td>
<td>6 Monthly</td>
</tr>
<tr>
<td><strong>Comments/Review</strong></td>
<td></td>
</tr>
</tbody>
</table>
**SERVICE STANDARD 09B: CLINICAL SERVICES (SURGICAL RELATED SERVICES)**

**Indicator 02 :** Percentage of unplanned re-admission within 72 hours of discharge

**Rationale :** This indicator was selected because:

- Unplanned re-admissions is often considered to be the result of suboptimal care in the previous admission leading to re-admission.
- Patients receiving good quality clinical services should not be subjected to unplanned re-admissions within 72 hours of discharge.

**Definition of Terms:**

**Unplanned re-admission:**
Patient being re-admitted for the management of the same clinical condition he or she was discharged with and the admission was not scheduled. (The same patient readmitted in the same unit/hospital ≤ 72 hours of previous discharge)

**Same condition:** Same diagnosis as referred to the ICD 10

**Comments:**
Number of readmission of one patient is considered as one case. Those on home leave or transferred to other unit is not considered as discharge.

**Inclusion Criteria :** Re-admission with similar conditions (primary diagnosis) within 72 hours of discharge

**Exclusion Criteria :** At Own Risk (AOR) discharge patients during first admission

**Type of Indicator :** Rate Based Process Indicator

**Numerator :** Number of patients with unplanned re-admission to the ward within 72 hours of discharge

**Denominator :** Total number of patients discharged during the same period of time the numerator data was collected

**Target :**

**Data Collection :** Monthly

**Comments/Review :**
### SERVICE STANDARD 09B: CLINICAL SERVICES (SURGICAL RELATED SERVICES)

**Indicator 03**: Rate of unplanned return to Operating Theatre within the same hospital admission following surgery

#### Rationale
This indicator was selected because:

- Any unplanned return to the operation theatre may indicate a quality care problem due to the occurrence of intra-operative problems that are serious enough to warrant intervention post-operatively. It refers to the need for an unexpected return to the operating theatre to address a previous complication of the original operation.

- This indicator measures the clinical effectiveness of care and patient safety.

#### Definition of Terms:

**Unplanned return to the operating theatre**:
Cases requiring unplanned return to the operating theatre for further intervention during the same admission after a surgical procedure (under GA)

**Inclusion Criteria**
All cases that had undergone surgery Inclusive of day of surgery admission

**Exclusion Criteria**
Endoscopy cases and day care cases

**Type of Indicator**
Rate Based Outcome indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of cases (of unplanned return to OT) after a surgical procedure under GA requiring further intervention during the same admission in the month</th>
<th>X 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Total number of cases undergone surgical procedure under GA in the month</td>
<td></td>
</tr>
</tbody>
</table>

**Target**

**Data Collection**: Monthly

**Comments/Review**: 
**SERVICE STANDARD 09B: CLINICAL SERVICES (SURGICAL RELATED SERVICES)**

**Indicator 04**: Percentage of patients with waiting time of more than seven (7) working days for fixation of long bone closed fracture

**Rationale**: This indicator was selected because:

- The long waiting time for long bone closed fracture internal fixation varies from few days to weeks, thus reflecting on the workload, facilities available and planning besides increased intra-operative difficulties.
- Prolonged waiting time will lead to morbidity, extended hospital length of stay and increased health cost and also the fracture is technically more difficult to fix.
- It indicates Timely Access & Clinical Effectiveness

**Definition of Terms:**

**Fractures**: Defined as long bone closed fractures

**Long bones**: Humerus, Radius, Ulna, Femur, Tibia, Fibula

**Internal Fixation**: Any form of device used to hold the bone fragments internally, includes any form of plate, nail, screw and wire buried under the skin. Combination of internal and external fixation will be considered as internal fixation

**Inclusion Criteria**: All patients admitted for long bone closed fractures

**Exclusion Criteria**: i) Medically unfit patients
  ii) Difficulty in obtaining consent and/or implant
  iii) Patient with additional open fracture(s)

**Type of Indicator**: Rate Based Outcome indicator

**Numerator**: Number of patients with long bone closed fracture fixations with waiting time of more than seven (7) working days

**Denominator**: Total number of patients with long bone closed fracture fixations done during the study period X 100%

**Target**: Data Collection: Monthly

**Comments/Review**: 
<table>
<thead>
<tr>
<th>No</th>
<th>INDICATOR</th>
<th>TARGET</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><strong>FACILITY WITH SPECIALITISTS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Emergency and Elective Caesarean Rates</td>
<td>&lt; 30%</td>
<td>Monthly</td>
</tr>
<tr>
<td>2</td>
<td>Percentage of Undiagnosed ureteric injury intraoperatively during benign</td>
<td>≤ 1%</td>
<td>6 Monthly</td>
</tr>
<tr>
<td></td>
<td>gynaecological surgery/ condition</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Maternal Mortality Ratio (sentinel event)</td>
<td>0</td>
<td>Monthly</td>
</tr>
<tr>
<td>4</td>
<td>Incidence of 3rd and 4th degree perineal tear following vaginal delivery</td>
<td>≤ 10%</td>
<td>Monthly</td>
</tr>
<tr>
<td></td>
<td><strong>DISTRICT FACILITY WITHOUT SPECIALITISTS (MATERNITY SERVICES)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Emergency and Elective Caesarean Rates</td>
<td></td>
<td>Monthly</td>
</tr>
<tr>
<td>2</td>
<td>Maternal Mortality Ratio (sentinel event)</td>
<td>0</td>
<td>Monthly</td>
</tr>
<tr>
<td>3</td>
<td>Incidence of 3rd and 4th degree perineal tear following vaginal delivery</td>
<td>&lt; 5%</td>
<td>Monthly</td>
</tr>
</tbody>
</table>

(Target: less than 5%)
Rationale: This indicator was selected because:

1. There is concern about whether high rates of caesarean section are justified because the procedure is not without risk. Women may experience complications after caesarean section such as haemorrhage, infection, and thrombosis, and they have an increased risk of complications in subsequent pregnancies.

2. Neonatal complications, although infrequent, include fetal respiratory distress syndrome, pulmonary hypertension, iatrogenic prematurity, and difficulty with bonding and breast feeding.

3. Adding to these concerns is the considerable variation in rates of caesarean section between the public and private healthcare facilities.

4. It is also known that an elective planned caesarean section is safer than an emergency surgery. It is good practice to track and trend the rates of elective and emergency caesarean sections.

Definition of Terms:

Caesarean Section (CS)
CS is surgery done for the delivery of the fetus via an abdominal and uterine incision.

Emergency Caesarean Section (CS):
CS done after admission for a clinical reason without prior plan during antenatal care is termed an emergency caesarean section.

Elective caesarean section
CS is done on planned basis during antenatal care. An elective caesarean section carries lesser risks to the mother and fetus compared to an emergency CS.

Inclusion Criteria: All cases of caesarean sections conducted during a specific period

Exclusion Criteria: All modes of deliveries other than Caesarean sections

Type of Indicator: Rate Based Outcome Indicator

Target: Facility with Specialists: < 30%

Data Collection: Monthly

Comments/Review:
SERVICE STANDARD 09C: CLINICAL SERVICES (OBSTETRICS & GYNAECOLOGY SERVICES)

Indicator 02: Percentage of undiagnosed ureteric injury intraoperatively during benign gynaecological surgery/condition

Rationale: This indicator was selected because:

- Patient safety is the important emphasis in delivering medical care. However, complications during surgery do occur but failure to recognize the complication is not acceptable.

- In gynaecological surgery, ureteric injury is a recognized complication but it is the responsibility of the surgeon to recognize it during surgery when primary repair can be arranged.

- The incidence of undiagnosed ureteric injury is a debilitating injury to the patient with possible long term complications. The use of this indicator would be reflective of the prompt diagnosis and speed of instituting care that would prevent the patient from enduring prolonged discomfort, excruciating pain and infection.

- To ensure competency and adherence to safety in performing hysterectomy for benign gynaecological conditions.

Definition of Terms:

1. Ureteric injury – Any type of ureteric injury.

Ureteric injuries can occur during “simple” routine pelvic surgeries, such as hysterectomies, and the risk increases in the presence of comorbidities i.e. pelvic inflammatory diseases and is associated with significant morbidity. The anatomic proximity of the ureters to the genital tract places them at risk of injury during pelvic surgery i.e. gynaecological procedures.


3. Undiagnosed ureteric injury – Failure to recognise ureteric injury during surgery

Inclusion Criteria: All cases of unrecognised intraoperative ureteric injury who had undergone obstetric & gynaecological surgery including LSCS

Exclusion Criteria: None

Type of Indicator: Rate Based Outcome Indicator

Numerator: Number of patients with undiagnosed intraoperative ureteric injury

Denominator: Total numbers of hysterectomy done for benign gynaecological condition

Target: ≤ 1% (facilities with specialists)

Data Collection:

Comments/Review:
SERVICE STANDARD 09C: CLINICAL SERVICES (OBSTETRICS &GYNAECOLOGY SERVICES)

Indicator 03 : Maternal Mortality Rate (MMR)

**Rationale** : This indicator was selected because:

- This indicator reflects maternal health and enables safety considerations in reducing maternal mortality.
- Most maternal deaths are avoidable, as the health-care solutions to prevent or manage complications are well known. All women need is access to antenatal care in pregnancy, skilled care during childbirth, and care and support in the weeks after childbirth. It is particularly important that all births are attended by trained and skilled health professionals, as timely management and treatment can make the difference between life and death. To improve maternal health, barriers that limit access to quality maternal health services must be identified and addressed at all levels of the health system.

**Definition of Terms:**

**Maternal Death**
According to the World Health Organization (WHO), maternal death is defined as the death of a woman while pregnant or within 42 days of termination of pregnancy, irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

Generally, there is a distinction between a direct maternal death resulting from complications arising during pregnancy, labour or during the post-partum period. Deaths may result from interventions, omissions, incorrect treatment or from a chain of events resulting from any of the above. The indirect obstetric deaths may result from previous existing disease or diseases, which are aggravated by the pregnancy resulting in her death. An example would be heart disease. Fortuitous deaths are those deaths that occur in a pregnant woman which are unrelated to her pregnancy and may have caused her death even if she were not pregnant.

**Inclusion Criteria** : All direct and indirect maternal deaths

**Exclusion Criteria** : Fatalities during but unrelated to a pregnancy are termed fortuitous maternal deaths.

**Type of Indicator** : Sentinel Event

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Total number of Maternal Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Total number of Live Births X 1000</td>
</tr>
<tr>
<td>Remarks</td>
<td>Maternal Mortality Rate is expressed as per 100,000 live births.</td>
</tr>
</tbody>
</table>

**Target** : 0

**Data Collection** : Monthly

**Comments/Review** :
### Service Standard 09C: Clinical Services (Obstetrics & Gynaecology Services)

**Indicator 04: Incidence of 3rd and 4th degree perineal tear following vaginal delivery**

**Rationale:** This indicator was selected because:

- Obstetric Trauma is a debilitating injury to the patient. The injury of third and fourth degree perineal tears during vaginal delivery extends to the perineal muscles, anal sphincter and bowel wall, and these require surgical treatment post-delivery. Possible long-term complications include continued perineal pain and anal incontinence. These types of tears can be prevented/reduced by employing appropriate labour management and care standards.

**Definition of Terms:**

*3rd and 4th degree perineal tear* – refers to incidence of Perineal Laceration / tear following vaginal delivery.

**Inclusion Criteria:**
- Patients who underwent vaginal deliveries in the hospital:
  - Without instrumentation
  - Sustained third (3rd) degree and fourth (4th) degree perineal laceration / tear

**Exclusion Criteria:**
- Patients who delivered outside of the hospital

**Type of Indicator:** Rate Based Outcome Indicator

| Numerator | Number of patients with 3rd and 4th degree tear following vaginal delivery without instrumentation in the hospital | X 100 |
| Denominator | Total number of vaginal deliveries without instrumentation in the hospital |

**Target:**
- District Facility without specialist: \( \leq 5 \)
- Facility with specialists: \( \leq 10\% \)

**Data Collection:** Monthly

**Comments/Review:**

SERVICE STANDARD 09D: CLINICAL SERVICES (PAEDIATRIC SERVICES)

There is tracking and trending of specific performance indicators which include but not limited to at least three (3) of the following:

<table>
<thead>
<tr>
<th>No</th>
<th>INDICATOR</th>
<th>TARGET</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Number of Mortality/Morbidity audits/meetings being conducted in the department with documentation of cases discussed</td>
<td>6 monthly</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Percentage of paediatric patients with unplanned re-admission for the same condition within 48 hours of discharge</td>
<td>≤ 2%</td>
<td>Monthly</td>
</tr>
<tr>
<td>3.</td>
<td>Community acquired pneumonia death rate in previously healthy children aged between one (1) month and five (5) years.</td>
<td>≤1%</td>
<td>Monthly</td>
</tr>
<tr>
<td>4.</td>
<td>Percentage of non-urgent cases that were given appointment for the first consultation within six (6) weeks at Paediatric Specialist Clinic.</td>
<td>≥ 80%</td>
<td>Monthly</td>
</tr>
</tbody>
</table>
## SERVICE STANDARD 09D: CLINICAL SERVICES (PAEDIATRIC SERVICES)

### Indicator 01: Number of mortality and morbidity audits/meetings being conducted in the department with documentation of cases discussed

**Rationale**: This indicator was selected because:

- The main purpose of the mortality and morbidity meetings is to improve patient management and quality of care. Regular mortality and morbidity meetings serve to look at the weakness and the shortfalls in the overall management of patients, hence it will be learnt and the same mistake could be prevented and would not be repeated in the future.

- Majority of children die below the age of 5 years. Review of all deaths among children will enable healthcare providers to rectify and improve services to children.

**Definition of Terms:**

**Morbidity Audits/Meetings:**

Discussion of case management in regards to patient morbidity, incidence reporting, issue of patient safety, clinical audit (at the department/hospital level).

**Mortality Meeting:**

Discussions related to the management of the case and cause of death of the patient. (eg: Clinical audit, POMR, Dengue Mortality, TB Mortality, Mortality under 5 years of age (MDG5), Perinatal Mortality Reviews (MDG4) Inquiries ) at hospital level.

**Documentation:**

Official minutes or notes taken during the meeting with attendance list (certified by the Hospital Director/ Person-In Charge (PIC))

**Inclusion Criteria**: All Morbidity and/or Mortality meetings being conducted at the hospital level.

**Exclusion Criteria**: Time period when the hospital was unable to function as usual due to mass casualty/disaster/crisis

**Type of Indicator**: This is a Process indicator

**Numerator**: Number of documented mortality and morbidity meetings that were conducted in six (6) months

**Target**: 

**Data Collection**: 6 Monthly

**Comments/Review**: 
## SERVICE STANDARD 09D: CLINICAL SERVICES (PAEDIATRIC SERVICES)

**Indicator 02**: Percentage of paediatric patients with unplanned re-admission for the same condition within 48 hours of discharge

### Rationale
This indicator was selected because:
- Unplanned re-admission is often considered to be the result of suboptimal care in the previous admission leading to re-admission.
- This indicator measures Clinical Effectiveness & Patient Centered care

### Definition of Terms:

1. **Unplanned re-admission**:
   
   Patient being re-admitted for the management of the same clinical condition he or she was discharged with and the admission was not scheduled. Return to hospital that was not planned for during initial admission

2. **Within 48 hours**:
   
   $\leq 48$ hours (2 days)

3. **Readmission**:
   
   The same patient readmitted in the same unit/hospital $\leq 48$ hours of previous discharge for the same condition (regardless of the number of times being admitted that is multiple readmission within 48 hours is considered as one admission)

4. **Discharge**:
   
   Patients name has been removed from ward register.

### Comments:
Number of readmission of one patient is considered as one case. Those on home leave or transferred to other unit is not considered as discharge

### Inclusion Criteria:
Re-admission to hospital for the same or related problem within 48 hours of discharge

### Exclusion Criteria:
1. Neonates and patients of $> 12$ years of age
2. AOR (at own risk) discharge patients during first admission
3. Patients re-admitted to other/different hospital
4. Patients with chronic illnesses
5. Re-admission requested by next of kin or other team

### Type of Indicator:
Rate Based Process Indicator

| **Numerator** | Number of paediatric patients with unplanned readmission to the paediatric ward/hospital within 48 hours of discharge $\times 100\%$ |
| **Denominator** | Total number of paediatric patients discharged during the same period of time the numerator data was collected |

### Target:
$\leq 2\%$

### Data Collection:
Monthly

### Comments/Review:

<table>
<thead>
<tr>
<th>SERVICE STANDARD 09D: CLINICAL SERVICES (PAEDIATRIC SERVICES)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indicator 03: Community acquired pneumonia death rate in previously healthy children aged between one (1) month and five (5) years.</td>
</tr>
</tbody>
</table>

**Rationale**: This indicator was selected because:
- Pneumonia is a common childhood infection where mortality can be reduced by careful management.

**Definition of Terms**:

1. **Community Acquired Pneumonia (CAP)**:
   Pneumonia acquired from normal social contact as opposed to being acquired during hospitalization and confirmed by radiological or laboratory investigations

2. **Previously healthy children**:
   Paediatric patients who are not known to have any serious medical illness before (e.g. ) Chronic childhood asthma, severe malnutrition, etc

**Inclusion Criteria**: Previously healthy children aged between one month and five (5) years

**Exclusion Criteria**:
1. Patients younger than one month and older than five (5) years
2. Hospital acquired pneumonia
3. Children with co-morbid conditions e.g. cardiac, chronic lung disease, severe neurological conditions causing restrictive lung disease etc
4. Epidemics of CAP

**Type of Indicator**: Rate Based Outcome Indicator

**Numerator**: Number of deaths due to community acquired pneumonia among previously healthy children aged between 1 month and 5 years X 100%

**Denominator**: Total number of cases admitted for community acquired pneumonia among previously healthy children aged between 1 month and 5 years

**Target**: ≥ 2 %

**Data Collection**: Monthly

**Comments/Review**: 
### SERVICE STANDARD 09D: CLINICAL SERVICES (PAEDIATRIC SERVICES)

<table>
<thead>
<tr>
<th>Indicator 04</th>
<th>Percentage of non-urgent cases that were given appointment for the first consultation within six (6) weeks at Paediatric Specialist Clinic.</th>
</tr>
</thead>
</table>

**Rationale**: This indicator was selected because:
- Patient centred services must give priority to prompt attention to patient needs by reducing waiting times for consultation.
- This indicator reflects timeliness and patient centred care.

**Definition of Terms:**

**Appointment**: Time taken from the date of referral received to the first consultation with the doctor at the specialist clinic.

**Inclusion Criteria**: Non-urgent cases referred to the Paediatric Specialist Clinic

**Exclusion Criteria**:
1. All urgent cases
2. Patients who request to delay the appointment date
3. Patients who request to see a specific doctor
4. Patients who default the first appointment given

**Type of Indicator**: Rate Based Process Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of non-urgent cases that were given appointment for first consultation within six weeks at Paediatric Specialist Clinic ( \times 100% )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Total number of non-urgent cases referred to Paediatric Specialist Clinic</td>
</tr>
</tbody>
</table>

**Target**: \( \geq 80\% \)

**Data Collection**: Monthly

**Comments/Review**:
## SERVICE STANDARD 09E: CLINICAL SERVICES (CARDIOLOGY)

There is tracking and trending of the following specific performance indicators where appropriate:

<table>
<thead>
<tr>
<th>No.</th>
<th>INDICATOR</th>
<th>TARGET</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Electrocardiogram taken within 10 minutes after triaging as possible Acute Coronary Syndrome patients</td>
<td>100%</td>
<td>Monthly</td>
</tr>
<tr>
<td>2.</td>
<td>Mortality and morbidity review of patients with acute myocardial infarction. (Morbidity discussion based on the department’s discretion)</td>
<td>100%</td>
<td>Monthly</td>
</tr>
<tr>
<td>3.</td>
<td>Thrombolytic Therapy within 30 minutes after hospital arrival in patient with acute myocardial infarction “Door to Needle” Time.</td>
<td>90%</td>
<td>Monthly</td>
</tr>
<tr>
<td>4.</td>
<td>Percentage of patient who received Thrombolytic Therapy (TT) in patients admitted for acute myocardial infarction.</td>
<td>90%</td>
<td>Monthly</td>
</tr>
<tr>
<td>5.</td>
<td>Percentage of “Normal” Diagnostic Angiogram</td>
<td>&lt;5%</td>
<td>Monthly</td>
</tr>
<tr>
<td>6.</td>
<td>Major complication rate during Diagnostic Coronary Angiogram (Death, acute myocardial infarction, stroke)</td>
<td>&lt;1%</td>
<td>Monthly</td>
</tr>
<tr>
<td>7.</td>
<td>Major complication rate during Percutaneous Coronary Intervention (Death, acute myocardial infarction, stroke)</td>
<td>&lt;1%</td>
<td>Monthly</td>
</tr>
<tr>
<td>8.</td>
<td>Percutaneous Coronary Intervention (PCI) within 90 minutes after diagnosed as acute myocardial infarction “Door to Balloon” Time</td>
<td>90%</td>
<td>Monthly</td>
</tr>
</tbody>
</table>
### SERVICE STANDARD 09E: CLINICAL SERVICES (CARDIOLOGY)

**Indicator 01**: Electrocardiogram taken within 10 minutes after triaging as possible Acute Coronary Syndrome patients

**Rationale**: This indicator was selected because:

- Acute Myocardial Infarction is a frequent cause of hospital death nationally.
- Patients with acute coronary syndrome (ACS) should have an electrocardiogram taken immediately upon arrival at the hospital.
- This indicator measures quality of care and adherence to practice guidelines.

**Definition of Terms**:

1. **Acute Coronary Syndrome**:
   Includes patients with unstable angina, non-ST elevation myocardial infarction (NSTEMI) and ST elevation myocardial infarction (STEMI). Acute coronary syndrome (ACS) Diagnosis of STEMI is in accordance with the Clinical Practice Guidelines- Management Of Acute ST Segment Elevation Myocardial Infarction (STEMI) 2014 - (3rd edition)

2. **Electrocardiogram**
   Electrocardiography is a commonly used, noninvasive procedure for recording electrical changes in the heart. The record, which is called an electrocardiogram (ECG or EKG), shows the series of waves that relate to the electrical impulses which occur during each beat of the heart. Output usually appears on a long scroll of paper that displays a printed graph of activity.

**Inclusion Criteria**: All cases with complaints of CHEST PAIN and suspected ACUTE MYOCARDIAL INFARCTION

**Exclusion Criteria**: NA

**Type of Indicator**: Rate Based Process Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of patients triaged as possible Acute Coronary Syndrome and electrocardiogram done within 10 minutes</th>
<th>X100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Total number of patients triaged as possible Acute Coronary Syndrome and electrocardiogram done</td>
<td></td>
</tr>
</tbody>
</table>

**Target**: 100%

**Data Collection**: Monthly

**Comments/Remarks:**
### SERVICE STANDARD 09E: CLINICAL SERVICES (CARDIOLOGY)

**Indicator 02: Mortality and morbidity review of patients with acute myocardial infarction.**

**Rationale**: This indicator was selected because:

- Acute Myocardial Infarction is a frequent cause of hospital death nationally.

- The main purpose of the mortality and morbidity meetings is to improve patient management and quality of care. Regular mortality and morbidity meetings serve to look at the weakness and the shortfalls in the overall management of patients with acute myocardial infarction, hence lessons will be learnt and the same mistake could be prevented and would not be repeated in the future.

**Definition of Terms:**

1. **Morbidity Meetings:**
   Discussion of case management in regards to patient morbidity, incident reporting, issue of patient safety, clinical audit (at the department/hospital level).

2. **Mortality Meeting:**
   Discussions related to the management of the case and cause of death of the patient (i.e. Clinical Audit, PMOR, Enquiries, deaths of patients with Acute Myocardial Infarction) conducted at department/hospital level.

**Inclusion Criteria** : All Morbidity and/or Mortality meetings on patients with Acute Myocardial Infarction being conducted at the department/hospital level.

**Exclusion Criteria** : Time period when the department/hospital was unable to function as usual due to disaster/crisis

**Type of Indicator** : Rate Based Process Indicator

| **Numerator** : Number of patients (admitted with Acute Myocardial Infarction) that had mortality and morbidity reviews conducted on each case | X 100 % |
| **Denominator** : Total number of cases (admitted with Acute Myocardial Infarction) scheduled for mortality and morbidity reviews |

**Target** : 100% of cases

**Data Collection** : Monthly

**Comments/Review** :
### SERVICE STANDARD 09E: CLINICAL SERVICES (CARDIOLOGY)

**Indicator 03**: Thrombolytic Therapy (TT) within 30 minutes after hospital arrival “Door to Needle” Time

**Rationale**: This indicator was selected because:

- Acute Myocardial Infarction is a frequent cause of hospital death nationally.
- It is important to measure the quality of care and adherence to practice guidelines.

**Definition of Terms**:

**Thrombolytic Therapy**:

Thrombolytic Therapy is widely used to treat Acute Myocardial Infarction to open up an acutely occluded artery. Thrombolytic Therapy should be instituted within 30 minutes after the arrival of patient and diagnosis is made at the hospital's Emergency Department.

**Inclusion Criteria**: All cases with ACUTE MYOCARDIAL INFARCTION with indications for Thrombolytic Therapy.

**Exclusion Criteria**: NA

**Type of Indicator**: Rate Based Process Indicator

<table>
<thead>
<tr>
<th><strong>Numerator</strong></th>
<th>Number of Acute Myocardial Infarction patients who had Thrombolytic Therapy done within 30 minutes after hospital arrival and diagnosis is made</th>
<th>X 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Denominator</strong></td>
<td>Total number of Acute Myocardial Infarction patients admitted and who received Thrombolytic Therapy.</td>
<td></td>
</tr>
</tbody>
</table>

**Target**

- 90%

**Data Collection**: Monthly

**Comments/Review**
### SERVICE STANDARD 09E: CLINICAL SERVICES (CARDIOLOGY)

<table>
<thead>
<tr>
<th>Indicator 04</th>
<th>Percentage of patient who received thrombolytic therapy (TT) in patients admitted for Acute Myocardial Infarction</th>
</tr>
</thead>
</table>

**Rationale**: This indicator was selected because:

- Acute Myocardial Infarction is a frequent cause of hospital death nationally.
- It is important to measure the quality of care and adherence to practice guidelines.

**Definition of Terms:**

**Thrombolytic Therapy**:

Thrombolytic Therapy (TT) is widely used to treat Acute Myocardial Infarction (AMI) to open up an acutely occluded artery. Thrombolytic Therapy should be instituted in all patients with AMI presenting within 12 hours of chest pain with no contraindication for receiving TT.

**Inclusion Criteria**: All cases with ACUTE MYOCARDIAL INFARCTION (AMI) with indications for Thrombolytic Therapy.

**Exclusion Criteria**: NA

**Type of Indicator**: Rate Based Process Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Denominator</th>
<th>Target ⇨ Data Collection ⇨ Comments/Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of AMI patients who were admitted and received Thrombolytic Therapy</td>
<td>Total number of AMI patients who were admitted with no contraindications for TT</td>
<td>90%</td>
</tr>
</tbody>
</table>
**SERVICE STANDARD 09E: CLINICAL SERVICES (CARDIOLOGY)**

**Indicator 05 : Rate of “Normal” Diagnostic Coronary Angiogram**

**Rationale** : This indicator was selected because:

- Coronary Angiogram is a frequent investigation to diagnose Coronary Artery Disease
- This indicator measures clinical effectiveness.

**Definition of Terms:**

1. **Coronary Angiogram:**

Coronary Angiogram is used to diagnose and/or treat various heart conditions. Doctors may recommend this procedure for a number of different reasons. The most common reason is to evaluate chest pain. Chest pain can be a symptom of coronary artery disease (CAD), and coronary angiogram can show whether plaque is narrowing or blocking the heart’s arteries.

2. **“Normal” Coronary Angiogram**

“Normal” findings from a coronary angiogram will indicate mild (<30%) or no stenosis of the coronary arteries.

**Inclusion Criteria** : All patients who had undergone coronary angiogram.

**Exclusion Criteria** : NA

**Type of Indicator** : Rate Based Process Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of patients who had coronary angiogram done and found ‘normal’ x100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Total number of patients who had coronary angiogram done</td>
</tr>
</tbody>
</table>

**Target** : <5%

**Data Collection** : Monthly

**Comments/Review** :
### SERVICE STANDARD 09E: CLINICAL SERVICES (CARDIOLOGY)

**Indicator 06 : Major Complication Rate during Diagnostic Coronary Angiogram**

**Rationale**: This indicator was selected because:

- Chest pain can be a symptom of coronary artery disease (CAD), and coronary angiogram can show any stenosis or occlusion of coronary arteries.
- Coronary angiogram test does involve some risks. This indicator measures the clinical effectiveness of care and competency of the healthcare professional.

**Definition of Terms:**

1. **Diagnostic Cardiac Catheterization**:

   Diagnostic Cardiac Catheterization is used to diagnose and/or treat various heart conditions. Doctors may recommend this procedure for a number of different reasons. The most common reason is to evaluate chest pain. Chest pain can be a symptom of coronary artery disease (CAD), and cardiac catheterization can show whether plaque is narrowing or blocking the heart’s arteries.

2. **Complications from diagnostic cardiac catheterization**:

   Similar to all surgical procedures, the cardiac catheterization test does involve some risks. Major complications that may occur during the procedure include:

   - Death
   - Acute Myocardial Infarction
   - Stroke

**Inclusion Criteria**: All patients who had cardiac catheterization done

**Exclusion Criteria**: NA

**Type of Indicator**: Rate Based Output Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of patients who had major complications during / and within 24 hours after diagnostic coronary angiogram.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Total number of patients who had diagnostic coronary angiogram done</td>
</tr>
</tbody>
</table>

Target: <1%

Data Collection: Monthly

Comments/Review:
### SERVICE STANDARD 09E: CLINICAL SERVICES (CARDIOLOGY)

**Indicator 07**: Major Complication Rates during Percutaneous Coronary Intervention

**Rationale**: This indicator was selected because:

- Percutaneous Coronary Intervention is frequently used to treat significant lesions in patients with Coronary Artery Disease.
- This indicator measures the clinical effectiveness of care and competency of the healthcare professional.

**Definition of Terms:**

1. **Percutaneous Coronary Intervention**;
   Percutaneous Coronary Intervention is used to treat significant Coronary Artery Disease. These specialized catheters include balloon catheters and devices that can open up narrowed arteries which include stents, rotablator, etc.

2. **Major Complications from Percutaneous Coronary Intervention include**:
   - Death
   - Acute Myocardial Infarction
   - Stroke

**Inclusion Criteria** : All patients who had Percutaneous Coronary Intervention done

**Exclusion Criteria** : NA

**Type of Indicator** : Rate Based Output Indicator

<table>
<thead>
<tr>
<th><strong>Numerator</strong></th>
<th>Number of patients who had major complications during / and within 24 hours after Percutaneous Coronary Intervention X100%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Denominator</strong></td>
<td>Total number of patients who had Percutaneous Coronary Intervention done</td>
</tr>
</tbody>
</table>

**Target** : <1%

**Data Collection** : Monthly

**Comments/Review** :
### SERVICE STANDARD 09E: CLINICAL SERVICES (CARDIOLOGY)

| Indicator 08 | Percutaneous Coronary Intervention (PCI) within 90 minutes after hospital arrival “Door to Balloon” Time |

**Rationale**: This indicator was selected because:

- Acute Myocardial Infarction is a frequent cause of hospital death nationally.
- This indicator measures clinical effectiveness

**Definition of Terms:**

1. **Primary Percutaneous Coronary Intervention (PCI):**

   Commonly known as coronary angioplasty or simply angioplasty, is a non-surgical procedure used to treat the stenotic (narrowed) coronary arteries of the heart found in coronary heart disease. PCI is usually performed by an interventional cardiologist.

2. **Percutaneous Coronary Intervention (PCI):**

   Percutaneous Coronary Intervention is a specific term for opening up totally occluded arteries in Acute Myocardial Infarction. Primary PCI is performed within 90 minutes after the arrival of the patient at the hospital’s emergency department.

**Inclusion Criteria**: All cases with ACUTE MYOCARDIAL INFARCTION with indications for Primary PCI

**Exclusion Criteria**: NA

**Type of Indicator**: Rate Based Process Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Number of Acute Myocardial Infarction patients who had primary PCI done within 90 minutes after hospital arrival X 100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Total number of Acute Myocardial Infarction patients admitted and had primary PCI done</td>
</tr>
</tbody>
</table>

**Target**: 90%

**Data Collection**: Monthly

**Comments/Review**:  

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*Malaysian Society for Quality in Health*  
*2017*

*Performance Indicators - MSQH Hospital Accreditation Standards 5th Edition*  
*Page 63*
There is tracking and trending of specific performance indicators which include but not limited to at least three (3) of the following:

<table>
<thead>
<tr>
<th>No.</th>
<th>INDICATOR</th>
<th>TARGET</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Number of mortality/morbidity audits/meetings being conducted in the department with documentation of cases discussed</td>
<td>6 Monthly</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Percentage of patients developed extravasation during chemotherapy treatment</td>
<td>&lt; 5%</td>
<td>6 Monthly</td>
</tr>
<tr>
<td>3.</td>
<td>Percentage of Medication Errors (from prescription to administration)</td>
<td>Monthly</td>
<td></td>
</tr>
</tbody>
</table>
SERVICE STANDARD 09F: CLINICAL SERVICES (ONCOLOGY SERVICES)

Indicator 01 : Number of mortality and morbidity audits/meetings being conducted in the department with documentation of cases discussed

Rationale : This indicator was selected because:

- The main purpose of the mortality and morbidity meetings is to improve patient management and quality of care. Regular mortality and morbidity meetings serve to look at the weakness and the shortfalls in the overall management of patients, hence it will be learnt and the same mistake could be prevented and would not be repeated in the future.

Definition of Terms:

1. Morbidity Audits/Meetings:

Discussion of case management in regards to patient morbidity, incidence reporting, issue of patient safety, clinical audit (at the department/hospital level).

2. Mortality Meeting:

Discussions related to the management of the case and cause of death of the patient at department/hospital level.

3. Documentation:

Official minutes or notes taken during the meeting with attendance list(certified by the Hospital Director/ Person-In Charge (PIC)

Inclusion Criteria : All Morbidity and/or Mortality meetings being conducted at the hospital level.

Exclusion Criteria : Time period when the hospital was unable to function as usual due to mass casualty/disaster/crisis

Type of Indicator : This is a Process indicator

Numerator : Number of documented mortality and morbidity meetings that were conducted in six (6) months

Target : 

Data Collection : 6 Monthly

Comments/Review : 

### SERVICE STANDARD 09F: CLINICAL SERVICES (ONCOLOGY SERVICES)

<table>
<thead>
<tr>
<th>Indicator 02</th>
<th>Percentage of patients developed extravasation during chemotherapy treatment</th>
</tr>
</thead>
</table>

**Rationale**: This indicator was selected because:

- Extravasation is a grave complication of chemotherapy miss-delivery and can lead to devastating effects on the patient.
- The aim of this indicator is to ascertain that chemotherapy delivery is being monitored by the specialists through continuing medical education and dissemination of knowledge about chemotherapy delivery to all stakeholders involved with the patient.
- It is an indirect measurement of adherence to stipulated chemotherapy delivery guidelines essential to ensure safe practice, provide evidence based care and increase awareness amongst healthcare givers.

**Definition of Terms:**

1. **Chemotherapy Treatment**: All types of intravenous administration of chemotherapeutic agents.

2. **Extravasation**: Inadvertent infiltration of chemotherapy preparations and fluids into the subcutaneous or subdermal tissues surrounding the intravenous administration site. The accidental leakage of cytostatic/vesicant agents into the perivascular tissues may have devastating short-term and long-term consequences for patients. In recent years, the increased focus on chemotherapy extravasation has led to the development of international guidelines that have proven useful tools in daily clinical practice.

**Inclusion Criteria**

1. Only hospitals with resident oncologists are included.
2. All patients that were given intravenous chemotherapy including patients with chemoport access
3. Grade 3 or 4 of extravasation at any point during the Chemotherapy treatment

**Exclusion Criteria**: Patients whose chemotherapy is given in hospitals where there is only a visiting oncologist

**Type of Indicator**: Rate Based Outcome Indicator

<table>
<thead>
<tr>
<th>Numerator</th>
<th>Numbers or frequency of extravasation during chemotherapy treatment X100%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denominator</td>
<td>Total number of chemotherapy infusions (including via Chemoport)</td>
</tr>
</tbody>
</table>

**Target**

- < 5%

**Data Collection**

- 6 Monthly

**Comments/Review**

---

*Malaysian Society for Quality in Health 2017*

*Performance Indicators - MSQH Hospital Accreditation Standards 5th Edition*
### SERVICE STANDARD 09F: CLINICAL SERVICES (ONCOLOGY SERVICES)

<table>
<thead>
<tr>
<th>Indicator 03</th>
<th>Numbers of Medication Errors (from prescription to administration)</th>
</tr>
</thead>
</table>

**Rationale**: This indicator was selected because:

- The occurrence of medication error/misadventure in the delivery of chemotherapy is a potentially preventable serious adverse event where there is much pain and suffering or temporary/permanent disability or even death.

- The occurrence of medication error in chemotherapy can lead to devastating effects on the patient. The large amount of medications used for infusion as well as the availability of new and potent chemotherapy requires further enhancement on the awareness on medication safety.

**Definition of Terms**:

**Medication Error**:

“Any preventable event that may cause or lead to inappropriate medication use or patient harm while the medication is in the control of the healthcare provider, patient, or consumer. Such events may be related to professional practice, healthcare products, procedures, and systems, including prescribing; order communication; product labeling, packaging, and nomenclature; compounding; dispensing; distribution; administration; education; monitoring; and use.

**Inclusion Criteria**: All patients on chemotherapy drugs (oral & infusion)

**Exclusion Criteria**: NA

**Type of Indicator**: Sentinel Event

**Numerator**: Numbers of medication error made in the process of prescribing, ordering, dispensing, reconstitution and administration of cytotoxic drug

**Target**: 0

**Data Collection**: Monthly

**Comments/Review**: 
**SERVICE STANDARD 10: ANAESTHETIC SERVICES**

There is tracking and trending of specific performance indicators not limited to but at least two (2) of the following and this shall include monitoring of pain score upon discharge and one other performance indicator:

<table>
<thead>
<tr>
<th>No.</th>
<th>INDICATOR</th>
<th>TARGET</th>
<th>Reporting Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Mandatory indicator: Pain score on discharge from recovery room should be less than four (4)</td>
<td>100%</td>
<td>Monthly</td>
</tr>
<tr>
<td>2.</td>
<td>Number of adverse events following regional anaesthesia, e.g. prolonged motor blockade, inadvertent dural puncture, Local Anaesthetic (LA) toxicity</td>
<td>Downward Trend</td>
<td>Monthly</td>
</tr>
<tr>
<td>3.</td>
<td>Number of adverse events following positioning during anaesthesia (peroneal nerve injury following lithotomy positioning)</td>
<td>Sentinel Event</td>
<td>Monthly</td>
</tr>
<tr>
<td>4.</td>
<td>Number of patients having prolonged stay in recovery room for more than two (2) hours (sentinel event)</td>
<td>0</td>
<td>Monthly</td>
</tr>
<tr>
<td>5.</td>
<td>Patient satisfaction survey with acute pain service and anaesthetic clinic</td>
<td>Upward Trend</td>
<td>6 Monthly</td>
</tr>
<tr>
<td>6.</td>
<td>Percentage of cancellation of elective cases after being passed in the anaesthetic clinic</td>
<td>10%</td>
<td>Monthly</td>
</tr>
<tr>
<td>7.</td>
<td>Subspecialties units in the Anaesthetic Services, e.g. Obstetrics and Gynaecology Services, cardiac anaesthesia, etc shall monitor any other two (2) indicators to support its goals and objectives</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>