



HEPATOBIILIARY SURGERY				
NO	INDICATOR	DIMENSION	STANDARD	SECONDARY DATA REPORTING FREQUENCY
1	Percentage of non-life threatening referral that are given appointment for first consultation within (\leq) 1 month	Efficiency	$\geq 75\%$	3 Monthly
2	Percentage of new Endoscopic Retrograde Cholangiopancreatography (ERCP) case from index referral that are given appointment within (\leq) 14 days	Efficiency	$\geq 90\%$	3 Monthly
3	Post-operative mortality rate for all major elective Hepatobiliary Surgery	Safety	$\leq 10\%$	3 Monthly



Discipline	: Hepatobiliary Surgery									
Indicator 1	: Percentage of non-life threatening referral that are given appointment for first consultation within (≤) 1 month									
Dimension of Quality	: Efficiency									
Rationale	: <ol style="list-style-type: none"> 1. A patient with a hepatobiliary illness should be able to gain access to our public health system without delay. 2. The time interval (from the date a new patient requested for an appointment till the date of the first appointment given) reflects on one aspect of accessibility. Delay is a failure to provide service according to needs and may lead to deterioration of the patient's illness. 									
Definition of Terms	: <p>Waiting time: From the date of requested appointment to the date of given appointment.</p> <p>1 month: 30 days (irrespective working or non-working days).</p>									
Criteria	: <p>Inclusion:</p> <ol style="list-style-type: none"> 1. Total number of new non-life threatening hepatobiliary cases referred for outpatient appointments. <p>Exclusion:</p> <ol style="list-style-type: none"> 1. Patients who defaulted the first appointment given. 2. Patients who request to see a specific doctor. 3. Patients who request to delay the appointment date given within 1 month. 									
Type of indicator	: Rate-based process indicator									
Numerator	: Number of patients given appointment for first consultation within (≤) 1 month									
Denominator	: Total number of patients given appointment for first consultation									
Formula	: $\frac{\text{Numerator}}{\text{Denominator}} \times 100\%$									
Standard	: ≥ 75%									
Data Collection & Verification	: <ol style="list-style-type: none"> 1. Where: Data will be from Hepatobiliary Surgery Unit/ Department. 2. Who: Data will be collected by Officer/ Paramedic/ Nurse in-charge of the department/ unit. 3. How to collect: Data is suggested to be collected from appointment record book. 4. How frequent: Monthly data collection within department. Validated summarised secondary data to be sent 3 monthly to Quality Unit of the respective hospital for monitoring. PVF to be sent 6 monthly to Quality Unit of hospital. 5. Who should verify: <table border="1" data-bbox="574 1518 1406 1692"> <thead> <tr> <th></th> <th>Prepared by</th> <th>Validated by</th> </tr> </thead> <tbody> <tr> <td>Primary Data</td> <td>Officer/ Paramedic/ Nurse in-charge</td> <td>Supervisor of the person who prepared the data</td> </tr> <tr> <td>Secondary Data</td> <td>Officer/ Paramedic/ Nurse in-charge</td> <td>Head of Department/ Specialist in-charge</td> </tr> </tbody> </table> <p>PVF must be verified by Head of Department, Head of Quality Unit and Hospital Director.</p>		Prepared by	Validated by	Primary Data	Officer/ Paramedic/ Nurse in-charge	Supervisor of the person who prepared the data	Secondary Data	Officer/ Paramedic/ Nurse in-charge	Head of Department/ Specialist in-charge
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Remarks	:									



Discipline	: Hepatobiliary Surgery									
Indicator 2	: Percentage of new Endoscopic Retrograde Cholangiopancreatography (ERCP) case from index referral that are given appointment within (\leq) 14 days									
Dimension of Quality	: Efficiency									
Rationale	: <ol style="list-style-type: none"> ERCP is a common procedure done by Hepatobiliary surgeons. ERCP is a procedure done to diagnose and treat problems in the liver, gall bladder, bile ducts and pancreas. It combines X-ray and the use of an endoscope. It is important to have patients given early appointment as it affects the management and outcome of a patient. 									
Definition of Terms	: Index referral: New cases/ patients referred to Hepatobiliary team for Endoscopic Retrograde Cholangiopancreatography (ERCP) from the date requested to the given appointment. 14 days: 14 days (irrespective working or non-working days).									
Criteria	: Inclusion: <ol style="list-style-type: none"> Total number of index referrals undergoing ERCP. Exclusion: <ol style="list-style-type: none"> Patients who default the first appointment given. Patients who request to delay the appointment date given within 14 days. 									
Type of indicator	: Rate based process indicator									
Numerator	: Number of index referrals undergoing ERCP within (\leq) 14 days									
Denominator	: Total number of index referrals undergoing ERCP									
Formula	: $\frac{\text{Numerator}}{\text{Denominator}} \times 100\%$									
Standard	: $\geq 90\%$									
Data Collection & Verification	: <ol style="list-style-type: none"> Where: Data will be from Hepatobiliary Surgery Ward/ Endoscopy Suite. Who: Data will be collected by Officer/ Paramedic/ Nurse in-charge of the department/ unit. How to collect: Data is suggested to be collected from appointment book/ procedure book. How frequent: Monthly data collection within department. Validated summarised secondary data to be sent 3 monthly to Quality Unit of the respective hospital for monitoring. PVF to be sent 6 monthly to Quality Unit of hospital. Who should verify: <table border="1" data-bbox="574 1451 1406 1623"> <thead> <tr> <th></th> <th>Prepared by</th> <th>Validated by</th> </tr> </thead> <tbody> <tr> <td>Primary Data</td> <td>Officer/ Paramedic/ Nurse in-charge</td> <td>Supervisor of the person who prepared the data</td> </tr> <tr> <td>Secondary Data</td> <td>Officer/ Paramedic/ Nurse in-charge</td> <td>Head of Department/ Specialist in-charge</td> </tr> </tbody> </table> PVF must be verified by Head of Department, Head of Quality Unit and Hospital Director.		Prepared by	Validated by	Primary Data	Officer/ Paramedic/ Nurse in-charge	Supervisor of the person who prepared the data	Secondary Data	Officer/ Paramedic/ Nurse in-charge	Head of Department/ Specialist in-charge
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Indicator 3	:	Post-operative mortality rate for all major elective Hepatobiliary surgery									
Dimension of Quality	:	Safety									
Rationale	:	<ol style="list-style-type: none"> 1. Internationally, it is found that post-operative mortality rate of major Hepatobiliary surgery is quoted to be around 10%. 2. Monitoring of post-operative mortality rate is important to ensure quality of care provided by MOH is in par with other countries. 									
Definition of Terms	:	Post-operative mortality: Mortality following all major elective Hepatobiliary surgery within the same admission or within (\leq) 30 days after surgery. Patients need to be seen in clinic around one month post-operative or followed up on the outcome via phone call with patient/ family member (if patient defaulted appointment).									
Criteria	:	<p>Inclusion:</p> <ol style="list-style-type: none"> 1. All major elective hepato-pancreatico-biliary surgeries. <p>Exclusion:</p> <ol style="list-style-type: none"> 1. Cholecystectomy- either open or laparoscopy. 2. Common bile duct exploration. 3. All emergency Hepatobiliary surgery. 4. Death after 30 days of operation. 5. Patients who defaulted post-operative appointments and family members were not contactable. 									
Type of indicator	:	Rate based outcome indicator									
Numerator	:	Number of surgical related deaths within (\leq) 30 days from major elective Hepatobiliary surgery									
Denominator	:	Total number of major elective Hepatobiliary surgeries performed									
Formula	:	$\frac{\text{Numerator}}{\text{Denominator}} \times 100\%$									
Standard	:	$\leq 10\%$									
Data Collection & Verification	:	<ol style="list-style-type: none"> 1. Where: Data will be from Hepatobiliary Surgery Unit/ Department. 2. Who: Data will be collected by Officer/ Paramedic/ Nurse in-charge of the department/ unit. 3. How to collect: Data is suggested to be collected from patient's case notes/ OT list/ OT record book. 4. How frequent: Monthly data collection within department. Validated summarised secondary data to be sent 3 monthly to Quality Unit of the respective hospital for monitoring. PVF to be sent 6 monthly to Quality Unit of hospital. 5. Who should verify: <table border="1" style="margin-left: 20px;"> <thead> <tr> <th></th> <th>Prepared by</th> <th>Validated by</th> </tr> </thead> <tbody> <tr> <td>Primary Data</td> <td>Officer/ Paramedic/ Nurse in-charge</td> <td>Supervisor of the person who prepared the data</td> </tr> <tr> <td>Secondary Data</td> <td>Officer/ Paramedic/ Nurse in-charge</td> <td>Head of Department/ Specialist in-charge</td> </tr> </tbody> </table> <p>PVF must be verified by Head of Department, Head of Quality Unit and Hospital Director.</p> 		Prepared by	Validated by	Primary Data	Officer/ Paramedic/ Nurse in-charge	Supervisor of the person who prepared the data	Secondary Data	Officer/ Paramedic/ Nurse in-charge	Head of Department/ Specialist in-charge
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Remarks	:	Data collection to be done by 2 month retrospective cohort of data. For April 2021, it will be patients operated in February 2021; to allow time for patients to be followed up during TCA to review outcome.									

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