

PERI-OPERATIVE MORTALITY REVIEW
MINISTRY OF HEALTH MALAYSIA
(SURGICAL FORM. V5.1)

INTRODUCTION

This form is to be filled for all deaths occurring within total length of hospital stay following a surgical or gynecological procedure performed under general or regional anesthesia. Also included are death in operation theatre prior to the induction of anaesthesia.

CASE PROFILE

----- POMR COORDINATOR -----

Name of Hospital	<input type="text"/>	Case Code	<input type="text"/>
Date of Birth	<input type="text"/>	Date of Mortality	<input type="text"/>
Date of admission	<input type="text"/>	Ethnicity	<input type="text"/> <input type="text"/>
Gender	<input type="radio"/> Male <input type="radio"/> Female		
Age	0 Years	0 Months	0 Days
Date of form issued	<input type="text"/>		
Co-ordinator's Initial	<input type="text"/>		

----- PRIMARY DEPARTMENT -----

Primary Department	<input type="text"/> <input type="text"/>																					
Department(s) involved in the patient management	<table><tr><td><input type="checkbox"/> General Surgery</td><td><input type="checkbox"/> Paediatric Surgery</td></tr><tr><td><input type="checkbox"/> Cardiothoracic surgery</td><td><input type="checkbox"/> Urology</td></tr><tr><td><input type="checkbox"/> ICU/ HDW/ CCU</td><td><input type="checkbox"/> Anesthesiology</td></tr><tr><td><input type="checkbox"/> Plastic Surgery</td><td><input type="checkbox"/> Gynecology</td></tr><tr><td><input type="checkbox"/> Obstetric</td><td><input type="checkbox"/> Orthopedic</td></tr><tr><td><input type="checkbox"/> Ophthalmology</td><td><input type="checkbox"/> ENT</td></tr><tr><td><input type="checkbox"/> Neurosurgical</td><td><input type="checkbox"/> Endocrine surgery</td></tr><tr><td><input type="checkbox"/> Vascular surgery</td><td><input type="checkbox"/> Emergency & Trauma</td></tr><tr><td><input type="checkbox"/> Medical</td><td></td></tr><tr><td><input type="checkbox"/> Others</td><td><input type="text"/></td></tr></table>		<input type="checkbox"/> General Surgery	<input type="checkbox"/> Paediatric Surgery	<input type="checkbox"/> Cardiothoracic surgery	<input type="checkbox"/> Urology	<input type="checkbox"/> ICU/ HDW/ CCU	<input type="checkbox"/> Anesthesiology	<input type="checkbox"/> Plastic Surgery	<input type="checkbox"/> Gynecology	<input type="checkbox"/> Obstetric	<input type="checkbox"/> Orthopedic	<input type="checkbox"/> Ophthalmology	<input type="checkbox"/> ENT	<input type="checkbox"/> Neurosurgical	<input type="checkbox"/> Endocrine surgery	<input type="checkbox"/> Vascular surgery	<input type="checkbox"/> Emergency & Trauma	<input type="checkbox"/> Medical		<input type="checkbox"/> Others	<input type="text"/>
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<input type="checkbox"/> Medical																						
<input type="checkbox"/> Others	<input type="text"/>																					

Pre-operative status

Co-morbid Factor

- | | |
|--|---|
| <input type="checkbox"/> Diabetes Mellitus | <input type="checkbox"/> Coronary Artery Disease |
| <input type="checkbox"/> Malignancy | <input type="checkbox"/> Cerebrovascular accident (CVA) |
| <input type="checkbox"/> Hypertension | <input type="checkbox"/> Left Ventricular dysfunction |
| <input type="checkbox"/> Heart Failure | <input type="checkbox"/> Coma |
| <input type="checkbox"/> Severe Head Injury | <input type="checkbox"/> Chronic Lung Disease |
| <input type="checkbox"/> Chronic Liver Disease | <input type="checkbox"/> Chronic Kidney Disease |
| <input type="checkbox"/> AIDS | <input type="checkbox"/> Valvular Heart Disease |
| <input type="checkbox"/> Uncontrolled Asthma | <input type="checkbox"/> Anaemia |
| <input type="checkbox"/> Others | <input type="text"/> |

Risk Factor

- | | | |
|---|--|---|
| <input type="checkbox"/> Prematurity | <input type="checkbox"/> Smoking | <input type="checkbox"/> Obstructive Sleep Apnoea |
| <input type="checkbox"/> Cachexia | <input type="checkbox"/> IVDU | <input type="checkbox"/> Cardiac Arrhythmia |
| <input type="checkbox"/> Obesity | <input type="checkbox"/> Bed-ridden | |
| <input type="checkbox"/> Dehydration | <input type="checkbox"/> Hypovolaemia | |
| <input type="checkbox"/> Congenital abnormalities | <input type="checkbox"/> Severe Sepsis | |
| <input type="checkbox"/> Others | <input type="text"/> | |

Blood Pressure Systole mmHg Diastole mmHg

Pulse Rate bpm Temp °C Respiration Breath/min

Weight Kg

Birth weight* Kg Gestational Age (At Birth) ☐ Full term ☐ Pre term weeks

Signs on admission

- | | | | | |
|------------------------------------|---------------------------------|-------------------------------------|-----------------------------------|-----------------------------------|
| <input type="checkbox"/> Jaundice | <input type="checkbox"/> Pale | <input type="checkbox"/> Dehydrated | <input type="checkbox"/> Cachexic | <input type="checkbox"/> Cyanosed |
| <input type="checkbox"/> Intubated | <input type="checkbox"/> Others | <input type="text"/> | | |

GCS for Head Injury / Coma :

Eyes (/4) Verbal (/5) Motor (/6)

Total GCS (/15) T ☐ C ☐

For Trauma,
significant injury
sustained

Instruction : Click on the Calculate RTS button to get the proper RTS value

Calculate RTS

Clear RTS

Revised Trauma
Score (if applicable)

0.00000000	
<input type="text" value="2.70"/>	% Probability of Survival

Investigations

FBC	On Admission		Pre-operative
Hb	<input type="text"/> g/dl	Hb	<input type="text"/> g/dl
TWC	<input type="text"/> x10 ³ /μL	TWC	<input type="text"/> x10 ³ /μL
Platelet	<input type="text"/> x10 ³ /μL	Platelet	<input type="text"/> x10 ³ /μL
Renal Profile	On Admission		Pre-operative
Na+	<input type="text"/> mmol/L	Na+	<input type="text"/> mmol/L
K+	<input type="text"/> mmol/L	K+	<input type="text"/> mmol/L
Urea	<input type="text"/> mmol/L	Urea	<input type="text"/> mmol/L
Se. Creatinine	<input type="text"/> μmol/L	Se. Creatinine	<input type="text"/> μmol/L
Blood Sugar	On Admission		Pre-operative
RBS	<input type="text"/> mmol/L	RBS	<input type="text"/> mmol/L
Coagulation Profile	On Admission		Pre-operative
INR	<input type="text"/> Ratio	INR	<input type="text"/> Ratio
PT	<input type="text"/> Sec	PT	<input type="text"/> Sec
APTT	<input type="text"/> Sec	APTT	<input type="text"/> Sec
	On Admission		Pre-operative
ABG	<input type="text"/>	ABG	<input type="text"/>
Albumin	<input type="text"/> g/dL	Albumin	<input type="text"/> g/dL
Lactate	<input type="text"/> mmol/dL	Lactate	<input type="text"/> mmol/dL

	On Admission		Pre-operative
ECG	<input type="radio"/> Normal <input type="radio"/> Abnormal		<input type="radio"/> Normal <input type="radio"/> Abnormal
Details	<input type="text"/>	Details	<input type="text"/>

X-rays / imaging	On Admission		Pre-operative
Details (If applicable)	<input type="text"/>	Details (If applicable)	<input type="text"/>

Other investigations

On Admission

Pre-operative

Details

Details

ASA Category

FIRST OPERATION

If more than 1 surgery performed, kindly indicate in the narrative report

Date of First
Operation

Time started

Time ended

Operation category

- ☐ Elective
☐ Emergency

Type of anesthesia

- ☐ LA
☐ GA
☐ Regional
☐ Other

Pre-Operative
diagnosis

Post-Operative
diagnosis

Operative Procedure

Number of surgery
during this admission
before mortality

Surgeon Status

- ☐ Consultant
☐ MO

- ☐ Specialist
☐ HO

☐ Clinical Specialist (Under Gazettement)

Supervisor
Informed?

- ☐ Yes ☐ No

Location of
Supervisor

- ☐ In OT ☐ In Hospital ☐ At Home
☐ Not Available

Anaesthetist Status

- | | |
|--|-------------------------------------|
| <input type="checkbox"/> Consultant | <input type="checkbox"/> Specialist |
| <input type="checkbox"/> Clinical Specialist (Under Gazettement) | <input type="checkbox"/> MO |
| <input type="checkbox"/> HO | <input type="checkbox"/> AMO |

Intra-operative complications?

- | | | |
|---|---|---|
| <input type="checkbox"/> None | <input type="checkbox"/> Excessive Bleeding | <input type="checkbox"/> Contamination |
| <input type="checkbox"/> Other organ injury | <input type="checkbox"/> Hypotension | <input type="checkbox"/> Anesthesia adverse event |
| <input type="checkbox"/> Others | <input type="text"/> | |

POST OPERATIVE CARE

Managed in ICU/ HDW	<input type="radio"/> Yes	<input type="radio"/> No	Ventilated Post-Op?	<input type="radio"/> Yes
				<input type="radio"/> No

Post-Op Complication

- | | | |
|--|---|---|
| <input type="checkbox"/> None | <input type="checkbox"/> Hypotension | <input type="checkbox"/> Bleeding |
| <input type="checkbox"/> Nausea/Vomiting | <input type="checkbox"/> Reintubation | <input type="checkbox"/> Atelectasis |
| <input type="checkbox"/> Pneumonia | <input type="checkbox"/> Hypothermia | <input type="checkbox"/> Ileus |
| <input type="checkbox"/> Anastomotic Leak | <input type="checkbox"/> Sepsis | <input type="checkbox"/> Surgical Site Infection |
| <input type="checkbox"/> Wound Breakdown | <input type="checkbox"/> Multi-organ Failure | <input type="checkbox"/> Superficial thrombophlebitis |
| <input type="checkbox"/> DIVC | <input type="checkbox"/> Deep Vein Thrombosis | <input type="checkbox"/> Pulmonary Embolism |
| <input type="checkbox"/> CVA | <input type="checkbox"/> Pressure Ulcer | <input type="checkbox"/> Acute Urinary Retention |
| <input type="checkbox"/> Renal Failure | <input type="checkbox"/> Post Spinal Headache | <input type="checkbox"/> Transfusion Reaction |
| <input type="checkbox"/> Adverse Drug Reaction | <input type="checkbox"/> Seizures | <input type="checkbox"/> Others |

FINAL OPERATION

Date of Final
Operation

Time started

Time ended

Operation category ☐ Elective
☐ Emergency

Type of anesthesia ☐ LA
☐ GA
☐ Regional
☐ Other

Pre-Operative
diagnosis

Post-Operative
diagnosis

Operative Procedure

Surgeon Status

- ☐ Consultant ☐ Specialist ☐ Clinical Specialist (Under Gazettement)
☐ MO ☐ HO

Supervisor
Informed?

- ☐ Yes ☐ No

Location of
Supervisor

- ☐ In OT ☐ In Hospital ☐ At Home
☐ Not Available

Anaesthetist Status

- ☐ Consultant ☐ Specialist
☐ Clinical Specialist (Under Gazettement) ☐ MO
☐ HO ☐ AMO

Intra-operative complications?

- ☐ None ☐ Excessive Bleeding ☐ Contamination
☐ Other organ injury ☐ Hypotension ☐ Anesthesia adverse event
☐ Others

POST OPERATIVE CARE

Managed in ICU/
HDW

- ☐ Yes ☐ No

Ventilated Post-Op?

- ☐ Yes
☐ No

Post-Op Complication

- | | | |
|--|---|---|
| <input type="checkbox"/> None | <input type="checkbox"/> Hypotension | <input type="checkbox"/> Bleeding |
| <input type="checkbox"/> Nausea/Vomiting | <input type="checkbox"/> Reintubation | <input type="checkbox"/> Atelectasis |
| <input type="checkbox"/> Pneumonia | <input type="checkbox"/> Hypothermia | <input type="checkbox"/> Ileus |
| <input type="checkbox"/> Anastomotic Leak | <input type="checkbox"/> Sepsis | <input type="checkbox"/> Surgical Site Infection |
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| <input type="checkbox"/> Renal Failure | <input type="checkbox"/> Post Spinal Headache | <input type="checkbox"/> Transfusion Reaction |
| <input type="checkbox"/> Adverse Drug Reaction | <input type="checkbox"/> Seizures | <input type="checkbox"/> Others |
-

DEATH

Place of Death

☐ Wad

☐ ICU/HDW

☐ OT/Recovery room

Post Mortem?

☐ Done

☐ Not Done

Summary of Post
Mortem findings (If
post-mortem done)

Cause of Death

Narrative Report

Give a summary of the sequence of events leading to and contributing to the death.

Highlight the following points:

- a) Presenting signs and symptoms
- b) Factors that led to the deterioration and death of the patient.

DO NOT WRITE NAMES OF PERSONS INVOLVED

Death Category :

☐ 1 ☐ 2 ☐ 3 ☐ 4A ☐ 4B ☐ 5 ☐ 6 ☐ 7

Date

Place your attachments here :

Comments by Head of Department/Unit or Specialist In-charge

Highlight if there were any :

- i. Inappropriateness of treatment
- ii. Delays or problems during the management
- iii. Areas that could have been improved

Death Category :

☐ 1 ☐ 2 ☐ 3 ☐ 4A ☐ 4B ☐ 5 ☐ 6 ☐ 7

If you were to manage a similar case in the future, suggest how would you do it differently for a better outcome?

☐ No Different ☐ Don't Know

Possible changes in management that could have given a better outcome

Date

HOD's
Initial

Please tick under which category this case is most appropriately discussed (DRG)

☐ Paeds ☐ Neuro ☐ Ortho ☐ Trauma
☐ Cardiothoracic ☐ General Surgery ☐ O&G ☐ Others

Anaesthetist Form
Required?

☐ Yes ☐ No

TO BE FILLED IN BY POMR ASSESSORS ONLY

----- POMR MEETING -----

**Comments by
Assessor**

Death Category :

☐ 1 ☐ 2 ☐ 3 ☐ 4A ☐ 4B ☐ 5 ☐ 6 ☐ 7

Contributory Factors in POMR

Anaesthetic

Pre-operative

- ☐ Inadequate assessment
- ☐ Inadequate optimisation of pre-existing medical / surgical condition
- ☐ Lack of supervision / inappropriate grade anaesthetist
- ☐ Weakness of organising system
- ☐ Fatigue

Intra-operative

- ☐ Inappropriate technique
- ☐ Lack of skill
- ☐ Inadequate management of anaesthetic complications
- ☐ Inappropriate fluid management
- ☐ Inappropriate drug selection / administration
- ☐ Adverse drug reaction
- ☐ Equipment failure
- ☐ Poor reversal
- ☐ Inadequate facilities / assistance to cope with crisis

Post-operative

- ☐ Inadequate monitoring in recovery room
- ☐ Failure to recognise need to provide continued post-operative monitoring / intervention in HDU / ICU
- ☐ Failure to provide post-operative care due to shortage of ICU beds
- ☐ Inappropriate post-operative management in HDU / ICU

Surgical

Pre-operative

- ☐ Inadequate assessment
- ☐ Inadequate optimisation of pre-existing medical / surgical condition
- ☐ Lack of supervision
- ☐ Inadequate facilities
- ☐ Delay in surgery
- ☐ Inappropriate decision

Intra-operative

- ☐ Inappropriate procedure
- ☐ Lack of supervision
- ☐ Inadequate skill
- ☐ Inadequate facilities

Post-operative

- ☐ Inappropriate post-operative management
- ☐ Inadequate monitoring
- ☐ Failure to recognise complications early
- ☐ Inadequate facilities for management of critically-ill patients

TO BE FILLED IN BY POMR ASSESSORS ONLY

Committee Decision

☐ Preventable Death

☐ Non Preventable Death

Assessors comment

Date