

# PERI-OPERATIVE MORTALITY REVIEW MINISTRY OF HEALTH MALAYSIA (ANAESTHESIA FORM)

## 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 -----

Hospital Code

Case Code

Date of Birth

Date of Mortality

Date of admission

Ethnicity

Gender

Male

Female

Age

Years

Months

Days

Date of form issued

Co-ordinator's  
Initial

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

Primary Department

Department(s)  
involved in the  
patient management

General Surgery

Cardiothoracic surgery

ICU/ HDW/ CCU

Plastic Surgery

Obstetric

Ophthalmology

Neurosurgical

Vascular surgery

Medical

Others

Paediatric Surgery

Urology

Anesthesiology

Gynecology

Orthopedic

ENT

Endocrine surgery

Emergency & Trauma

## Pre-operative status

Pre-operative assessment was done in

Co-morbid Factor	Diabetes Mellitus	Coronary Artery Disease
	Malignancy	Cerebrovascular accident (CVA)
	Hypertension	Left Ventricular dysfunction
	Heart Failure	Coma
	Severe Head Injury	Chronic Lung Disease
	Chronic Liver Disease	Chronic Kidney Disease
	AIDS	Valvular Heart Disease
	Uncontrolled Asthma	Anaemia
	Others	

Risk Factor	Prematurity	Smoking	Obstructive Sleep Apnoea
	Cachexia	IVDU	Cardiac Arrhythmia
	Obesity	Bed-ridden	
	Dehydration	Hypovolaemia	
	Congenital abnormalities	Severe Sepsis	
	Others		

Blood Pressure	Systole	mmHg	Diastole	mmHg
Pulse Rate	bpm	Temp	'C	Respiration
Weight	Kg			Breath/min
Birth weight*	Kg	Gestational Age (At Birth)	Full term Pre term	weeks

Signs on admission

Jaundice	Pale	Dehydrated	Cachexic	Cyanosed
Intubated	Others			

GCS for Head Injury / Coma :

Eyes ( /4)	Verbal ( /5 )	Motor ( /6)
Total GCS ( /15)	T	
	C	

## Investigations

FBC	On Admission				Pre-operative
Hb		g/dl	Hb		g/dl
TWC		$\times 10^3/\mu\text{L}$	TWC		$\times 10^3/\mu\text{L}$
Platelet		$\times 10^3/\mu\text{L}$	Platelet		$\times 10^3/\mu\text{L}$
Renal Profile	On Admission				Pre-operative
Na+		mmol/L	Na+		mmol/L
K+		mmol/L	K+		mmol/L
Urea		mmol/L	Urea		mmol/L
Se. Creatinine		$\mu\text{mol/L}$	Se. Creatinine		$\mu\text{mol/L}$
Blood Sugar	On Admission				Pre-operative
RBS		mmol/L	RBS		mmol/L
Coagulation Profile	On Admission				Pre-operative
INR		Ratio	INR		Ratio
PT		Sec	PT		Sec
APTT		Sec	APTT		Sec
	On Admission				Pre-operative
ABG			ABG		
Albumin		g/dL	Albumin		g/dL
Lactate		mmol/dL	Lactate		mmol/dL
	On Admission				Pre-operative
ECG	Normal Abnormal				Normal Abnormal
Details			Details		

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### X-rays / imaging

	On Admission				Pre-operative
Details (If applicable)			Details (If applicable)		

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Other investigations

On Admission

Pre-operative

Details

Details

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ASA Category

### FIRST OPERATION

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

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Date of First  
Operation

Time started

Time ended

Operation category

Elective

Emergency

Pre-Operative  
diagnosis

Post-Operative  
diagnosis

Operative Procedure

Number of surgery  
during this admission  
before mortality

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Anaesthetist Status

Consultant  
MO

Specialist  
HO

Clinical Specialist ( Under Gazettement )  
AMO

Supervisor  
Informed?

Yes      No

Location of  
Supervisor

In OT  
Not Available

In Hospital

At Home

Surgeon Status

Consultant MO	Specialist HO	Clinical Specialist ( Under Gazettement )
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Intra-operative complications?

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

**ANAESTHESIA**

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Anaesthesia  
Technique :

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Intra-operative Monitoring	Routine	CVP	TEE
	Urine Output	PNS	Temperature
	IABP	PCWP	BIS
	Cardiac Output	TOF	
	Other		

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Intra-Operative Anaesthetic Complication(s)	Nil
	Desaturation
	Failed Intubation
	Laryngospasm
	Bronchospasm
	Aspiration
	Hypotension
	Myocardial Ischemia
	Cardiac Arrest
	Hypothermia
	Failed Regional / Spinal (Convert to GA/abandon)
	Complicated Regional / Spinal ( Eg. Total Spinal, Bloody CSF, Accidental Injury)
	Drug Allergy
Other	

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Recovery Room  
Complication(s)

Nil  
Hypotension  
Post-operative Nausea / Vomiting  
Reintubation  
Cardiac Arrest

Desaturation  
Hypothermia  
Bleeding  
Inadequate Pain Relief  
Other

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Did patient received  
acute pain service?

Yes      No

Discharged To

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### POST OPERATIVE CARE

Managed in ICU/  
HDW/PACU

Yes      No

Ventilated Post-Op?

Yes  
No

Post-Op Complication

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

### LAST OPERATION

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Date of Final  
Operation

Time started

Time ended

Operation category

Elective  
Emergency

Pre-Operative  
diagnosis

Post-Operative  
diagnosis

Operative Procedure



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Intra-Operative Anaesthetic Complication(s)	Nil Desaturation Failed Intubation Laryngospasm Bronchospasm Aspiration Hypotension Myocardial Ischemia Cardiac Arrest Hypothermia Failed Regional / Spinal (Convert to GA/abandon) Complicated Regional / Spinal ( Eg. Total Spinal, Bloody CSF, Accidental Injury) Drug Allergy Other
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Recovery Room Complication(s)	Nil Hypotension Post-operative Nausea / Vomiting Reintubation Cardiac Arrest	Desaturation Hypothermia Bleeding Inadequate Pain Relief Other
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Did patient recieved acute pain service?	Yes	No
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Discharged To

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**POST OPERATIVE CARE**

Managed in ICU/ HDW/PACU	Yes	No	Ventilated Post-Op?	Yes
				No

Post-Op Complication

None	Hypotension	Bleeding
Nausea/Vomiting	Reintubation	Atelectasis
Pneumonia	Hypothermia	Ileus
Anastomotic Leak	Sepsis	Surgical Site Infection
Wound Breakdown	Multi-organ Failure	Superficial thrombophlebitis
DIVC	Deep Vein Thrombosis	Pulmonary Embolism
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Renal Failure	Post Spinal Headache	Transfusion Reaction
Adverse Drug Reaction	Seizures	Others



## DEATH

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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) Difficulties encountered eg. IV access, airway, drugs, equipment.
- b) Factors that led to deterioration and death of patient.

**DO NOT WRITE NAMES OF HOSPITALS OR 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. Adequacy of pre-op optimization
- ii. Delays or problems during the management
- iii. Issues related to availability of OR,ICU beds and equipment

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

**Comments by Assessor**

Death Category :

1            2            3            4A            4B            5            6            7

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**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

**Committee Decision**

Date