

NCG-KCDO EMR Requirement (NER)- Surgical Oncology Module (Version 1.0)

FOREWORD

The National Cancer Grid (NCG) Electronic Medical Records (EMR) initiative has been well received by the NCG Hospitals and our community of healthcare professionals and stakeholders. The enthusiasm and support we have garnered for this initiative reflect a shared commitment to advancing cancer care through technology and collaboration.

As part of our ongoing efforts to enhance the EMR initiative, we have established distinct subcommittees to focus on specific areas of improvement. These subcommittees bring together subject matter experts in oncology from several NCG hospitals across the country to build the features and functionalities in EMR systems.

The Surgical Oncology module has been developed in close collaboration with surgical oncologists from across the NCG, leveraging their insights and expertise to ensure its effectiveness and usability. This module aims to streamline the OT Scheduler process, providing oncologists, anaesthetists, nurses and other healthcare providers with the tools they need to deliver optimal care to patients with cancer.

This collaborative effort has been informed by thorough industry research, ensuring that the NCG helps EMR vendors build solutions aligned with best practices and meet the diverse needs of our stakeholders.

We share the pre-final version of the Surgical oncology module and welcome feedback, suggestions and guidance from healthcare professionals involved in treating patients with cancer, healthcare technology companies and providers. Your inputs will help develop EMRs with strong cancer care workflows which in turn will ensure better care, outcomes and value-based care for patients with cancer across India.

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1. NCG EMR INITIATIVE OVERVIEW

The National Cancer Grid Koita Centre for Digital Oncology (NCG KCDO) launched an initiative to empanel Electronic Medical Records (EMR) vendors and help develop high quality EMR solutions that are appropriate for use in hospitals providing cancer care. This marks a significant milestone in the ongoing efforts to promote digital health and enhance cancer care across the country. Launched with the aim of standardizing and improving clinical practices in oncology, it is a collaborative approach involving leading healthcare institutions, clinicians, and technology partners.

In March 2023, NCG KCDO released the NCG EMR Requirements (NER) – a comprehensive set of EMR requirements needed for effective management of patients with cancer. The NER is a blueprint for the development and implementation of robust EMR systems which will serve general hospitals well, but are also tailored specifically for oncology practices. The NER document is a result of intense deliberations over several months between healthcare professionals involved in cancer care and technology experts, and is available as a digital public good at [NCG-KCDO EMR Initiative](#).

To further support the development of the empanelled EMR systems, the NCG is developing detailed requirements and features in specific areas of oncology including radiotherapy, chemotherapy and surgical oncology. This document details the surgical oncology requirements and features (including Operation Theatre, surgery, anaesthesia and recording of postoperative outcomes), based on best practices developed at several leading NCG centres.

2. EMR FEATURE BUILDING

A. Surgical Oncology Module Overview

Building on the features outlined in the NER (NCG EMR Requirement), the Surgical Oncology Module is designed to optimize the documentation, streamlining the process, ensuring quality checks within the documentation, monitoring the key performance metrics, minimizing the errors due to lack or incomplete documentation, ease of use, analytics to provide patterns of care and outcomes.

Key features of the Surgical Oncology module include:

2.1 Patient Scheduling: Efficiently schedule surgical procedures for patients based on various factors such as surgeon availability, operating room availability and urgency of the procedure.

2.2 Procedure Prioritization: Prioritize surgical procedures based on the severity of the condition and other critical factors to ensure timely treatment for patients with urgent needs.

2.3 Resource Management: Manage surgical resources including operating rooms, surgical equipment, staff, and supplies to optimize utilization and avoid conflicts or double bookings.

2.4 Surgeon and Staff Allocation: Assign surgeons, nurses, anaesthetists, and other support staff to surgical procedures based on their availability, expertise, and workload, ensuring efficient resource allocation.

2.5 Real-Time Updates: Provide real-time updates and notifications to surgical teams regarding schedule changes, cancellations, or additions, enabling prompt adjustments and minimizing disruptions.

2.6 Anaesthesia Management: Coordinate anaesthesia services including pre-operative evaluations, anaesthesia selection, monitoring during surgery, and post- anaesthesia care, ensuring patient safety and comfort.

2.7 Compliance and Documentation: Ensure compliance by incorporating surgical checklist and maintain documentation for surgical procedures, including pre-operative, intraoperative records, and post-operative procedures, complications, specimen handling and other details.

2.8 Post- Operative Complications: A comprehensive list of post-operative complications has been developed with a feature to add Clavien Dindo grading for each complication.

2.9 Reporting and Analytics: Generate comprehensive reports and log book on surgical activity.

B. Methodology

The methodology used to build the Surgical Oncology Module within the NER (NCG EMR Requirements) document encompasses a systematic and collaborative approach, involving key stakeholders and leveraging best practices across NCG hospitals. Recognizing the need, NCG KCDO formed a subcommittee which consisted of surgical oncologists from leading NCG hospitals across the country. The Surgical Oncology Core Team developed the Surgical Oncology Module (including surgical, anaesthesia and nursing requirements) based on their expertise, and discussions with clinical and technology professionals.

The Surgical Oncology module is characterized into 9 parts:

OT- Part A: OT Booking- It refers to the process of scheduling surgical procedures for oncology patients in the operating theatre (OT). OT Booking ensures efficient utilization of operating room resources, minimizes scheduling conflicts, and optimizes patient flow for surgical interventions.

OT- Part B: OT Worklist- The OT Worklist is a dynamic schedule that provides an overview of scheduled surgical cases, including patient details, procedure types, surgeon assignments, and anticipated start times. It serves as a real-time dashboard for OT staff to monitor the status of surgical cases, prioritize tasks, and allocate resources accordingly.

OT- Part C: Surgical Checklist- It is a standardized tool designed to enhance patient safety and minimize the risk of adverse events during surgical procedures. It consists of a series of pre-operative, intra-operative, and post-operative safety checks aimed at verifying patient identity, surgical site marking, equipment availability, and adherence to best practices.

OT- Part D: Surgical Management- Details about Surgical team along with type of surgery done, details of surgery (preparation, incision etc) intra- Operative findings, surgical specimen details, any complications and timings of the surgery.

OT- Part E: Anaesthesia Management- It involves the administration and monitoring of anaesthesia during surgical procedures for oncology patients and includes pre-operative assessment, anaesthesia induction, intra-operative monitoring, pain management, and post-operative care.

OT- Part F: Post- Operative Complications- This section refers to adverse events or complications that may arise following oncology surgery.

OT- Part G: Diagrammatic Template- This section is a visual aid or template used to document surgical procedures, anatomical landmarks, and operative findings.

OT- Part H: Log Book- Enables surgeons and anaesthesiologists to track their caseload, monitor outcomes, and reflect on their practice, contributing to continuous improvement and learning.

OT- Part I: Reports- Reports refer to generated documents or summaries that capture key data and metrics related to surgical oncology activities.

3. OT- Part A: OT Booking

Surgical Oncology Module			
SNo	Data Elements	Clinician's Response	Remarks for Vendors
1	Case Number		
2	Name of the patient		Auto Populate based on case number
3	Age/Sex		Auto Populate based on case number
4	Ward/Bed		
5	Unit Name		
6	Treating Doctor		
7	Case Status	<input type="checkbox"/> Minor <input type="checkbox"/> Elective <input type="checkbox"/> Emergency <input type="checkbox"/> Re- Exploration	
8	Type of Surgery	<input type="checkbox"/> Primary <input type="checkbox"/> Adjunct <input type="checkbox"/> Reconstructive	Multiple Choice Possible
9	Name of Procedure		List of surgeries in the Appendix 2. Surgeries to

			be mapped as per response selected in Row no 8.
10	Laterality	<input type="checkbox"/> Right <input type="checkbox"/> Left <input type="checkbox"/> Bilateral <input type="checkbox"/> Not Applicable	
11	Approach	<input type="checkbox"/> Open <input type="checkbox"/> Laparoscopic <input type="checkbox"/> Robotic	Multiple Choice Possible
12	Duration of the surgery	<input type="checkbox"/> 1 Hour <input type="checkbox"/> 2 Hours <input type="checkbox"/> 3 Hours <input type="checkbox"/> 4 Hours <input type="checkbox"/> 5 Hours <input type="checkbox"/> 6 Hours <input type="checkbox"/> 7 Hours <input type="checkbox"/> More than 8 Hours	
13	Date of the surgery		Calendar View
14	OT Room No		Enable as per NCG Centre
15	Surgeon Name		Enable as per NCG Centre
16	Pre-Operative Diagnosis		Open text box
17	Viral Markers	<input type="checkbox"/> HBsAg <input type="checkbox"/> HCV <input type="checkbox"/> HIV <input type="checkbox"/> COVID	
18	Insurance	<input type="checkbox"/> Yes <input type="checkbox"/> No	If the response to row no 18 is 'Yes', row no 19 to be enabled.
19	Type of Insurance	<input type="checkbox"/> State Insurance <input type="checkbox"/> Private Insurance <input type="checkbox"/> Ayushman Bharat	To be configured as per NCG Centre
20	ASA Physical Status class		Auto Populate from PAC Module and option to modify.
21	High Risk MDT	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Applicable	By default, it should be Not Applicable.
22	If Yes, Comments		If the response to row no 21 is 'Yes', row no 22 to be enabled.
23	Blood group		Auto populate from EMR
24	Any Past transfusions	<input type="checkbox"/> Yes	

		<input type="checkbox"/> No	
25	Any history of transfusion reactions	<input type="checkbox"/> Yes <input type="checkbox"/> No	Row 26 to be enabled only if the response to row 25 is 'Yes'
26	If yes, Details about reaction		Open text box
27	Remarks (Eg equipment needed/Position of the patient etc)		Open text box
Go to Part B: OT Worklist			

4. OT- Part B: OT Worklist

OT Worklist			
SNo	Data Elements	Clinician's Response	Remarks for Vendors
1	Primary Details		
A	From Date		Provide date filter option-. Patient list to appear in the format given in SNO 2 (Select from the table) as per the option selected. Example- If Option C (Completed/Signed) is selected- all the surgeries completed within the selected timeframe to appear in the given format.
B	To Date		
C	Completed/Signed		List of surgeries completed to appear within the timeframe selected as per the given format
D	Cancelled		List of surgeries cancelled to appear within the

			timeframe selected as per the given format
E	OT Room		Same as above
F	Pending In progress		Same as above
G	Change Priority Order		Provide an option to change priority order of the surgery from the table below. And provide reason if the order is changed. Restricted access to be enabled as per NCG Member center

2 Select from the table

Select	Case No	Name of the Patient	Age/ Sex	Ward/ OPD	OT Room No	Date of Surgery	Name of Procedure proposed	Remarks	Clinical Data	Blood Requisition	PAC	Fit for Anaesthesia
									Link to EMR	Link to EMR	Link to EMR	Auto populate from PAC Module

Go to OT Part C: Surgical Checklist

5. OT- Part C: Surgical Checklist

Surgical Checklist			
Sno	Data elements	Clinician's Response	Remarks for Vendors
1	Primary details		
A	Case Number		
B	Name of the patient		Auto Populate based on case number
C	Age/Sex		Auto Populate based on case number
D	Ward/Bed		
E	Unit Name		
F	Treating Doctor		
2	In the OT before Induction- SIGN IN		
A	Patient has confirmed		
i	Identity	<input type="checkbox"/> Yes <input type="checkbox"/> No	
ii	Procedure	<input type="checkbox"/> Yes <input type="checkbox"/> No	
iii	Side (Laterality)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
iv	Anaesthesia and Surgery consent	<input type="checkbox"/> Yes <input type="checkbox"/> No	
B	Site marked	<input type="checkbox"/> Yes <input type="checkbox"/> No	
C	Viral Markers	<input type="checkbox"/> Yes <input type="checkbox"/> No	
D	Blood Confirmed	<input type="checkbox"/> Yes, No of Units Avail_____	
E	Specified Instruments available	<input type="checkbox"/> Yes <input type="checkbox"/> No	
F	Preparation for position	<input type="checkbox"/> Yes <input type="checkbox"/> No	
G	Anaesthesia Machine Check	<input type="checkbox"/> Yes <input type="checkbox"/> No	

H	Pulse Oximeter on patient and functioning	<input type="checkbox"/> Yes <input type="checkbox"/> No	
I	Difficult airway	<input type="checkbox"/> Yes <input type="checkbox"/> No	
J	Aspiration risk	<input type="checkbox"/> Yes <input type="checkbox"/> No	
K	Adequate starvation	<input type="checkbox"/> Yes <input type="checkbox"/> No	
L	Any Known Allergy?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
M	E-Signatures		
I	Surgical Team		E-Sign
ii	Anaesthesia Team		E-Sign
iii	Nursing Team		E-Sign
3 In the OT before Skin Incision- TIME OUT			
A	Surgeons, anaesthetist nurses and technicians introduce themselves and confirm patients Identity	<input type="checkbox"/> Yes <input type="checkbox"/> No	
I	Patient	<input type="checkbox"/> Yes <input type="checkbox"/> No	
ii	Procedure	<input type="checkbox"/> Yes <input type="checkbox"/> No	
iii	Side (Laterality)	<input type="checkbox"/> Yes <input type="checkbox"/> No	
B	Anticipated critical Events		
i	From Surgical Team		Open text box
ii	From Anaesthesia Team		Open text box
iii	From Nursing Team		Open text box
C	Mop/Gauze count done and recorded	<input type="checkbox"/> Yes <input type="checkbox"/> No	
D	Antibiotic Prophylaxis	<input type="checkbox"/> Yes <input type="checkbox"/> No	
E	Essential Imaging displayed	<input type="checkbox"/> Yes <input type="checkbox"/> No	
F	Check HPR Frozen form	<input type="checkbox"/> Yes <input type="checkbox"/> Not Applicable	
G	Check Tourniquet application	<input type="checkbox"/> Not Applicable <input type="checkbox"/> Open text box	
H	Throat pack inserted	<input type="checkbox"/> Yes <input type="checkbox"/> No	

I	E-Signatures		
i	Surgical Team		E-Sign
ii	Anaesthesia Team		E-Sign
iii	Nursing Team		E-Sign
4 In the OT before closure- SIGN OUT			
A	Name of Procedure Recorded	<input type="checkbox"/> Yes <input type="checkbox"/> No	
B	Instrument, Sponge and needle count correct	<input type="checkbox"/> Yes <input type="checkbox"/> Open text box	
C	Specimen Labelled	<input type="checkbox"/> Yes <input type="checkbox"/> No	
D	Any Equipment problems to be addressed	<input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, provide an open text box
E	Post Operative Care concerns		
i	Post Op Care Concerns-Surgical Team		Open text box
ii	Post Op Care Concerns-Anaesthesia Team		Open text box
iii	Post Op Care Concerns-Nursing Team		Open text box
F	E-Signatures		
I	Surgical Team		E-Sign
ii	Anaesthesia Team		E-Sign
iii	Nursing Team		E-Sign
5 Before Extubation			
A	Before Extubation, throat pack removed	<input type="checkbox"/> Yes <input type="checkbox"/> Not Applicable	
B	E-Signatures		
I	Surgical Team		E-Sign
ii	Anaesthesia Team		E-Sign
iii	Nursing Team		E-Sign
Go to OT Part D-Surgical Management			

6. OT- Part D: Surgical Management

OT Management			
Sn o	Data elements	Clinician's Response	Remarks for Vendors
1	Primary details		
A	Case Number		
B	Name of the patient		Auto Populate based on case number
C	Age/Sex		Auto Populate based on case number
D	Ward/Bed		
E	Unit Name		
F	Treating Doctor		
2	Surgery team		
A	Primary Surgeon		Restricted access as per the Dept
B	Assistant Surgeon 1		Add more rows depending upon team strength
C	Assistant Surgeon 2		
D	Assistant Surgeon 3		
E	Primary Anaesthetist		Restricted access as per the Dept
F	Anaesthetist 1		
G	Anaesthetist 2		
2	Reconstruction Team		
A	Primary Surgeon		Restricted access as per the Dept
B	Assistant Surgeon 1		
C	Assistant Surgeon 2		
D	Assistant Surgeon 3		
3	Nurses		

A	Scrub Nurse 1		Restricted access as per the Dept
B	Scrub Nurse 2		
4 Duration			
A	Operation	Start Date_____	Start time_____
B	Anaesthesia	Start Date_____	Start time_____
C	Type of Anaesthesia	<input type="checkbox"/> General <input type="checkbox"/> Regional <input type="checkbox"/> Both (General + Regional) <input type="checkbox"/> MAC	Auto populate from OT Part E- Anaesthesia Management
5 Operation Proposed			
A	Unit Name		Auto populate
B	Name of Procedure		Auto populate
C	Prophylactic antibiotics		Open text box
6 Operation Performed			
A	Unit Name		
SNO	TYPE OF SURGERY	NAME OF PROCEDURE	LATERALITY
A	Primary		
B	Adjunct		
C	Reconstructive		
D	Node dissection		
B	Other Name of Procedure		Open text box
C	Approach		Open text box
D	Pre-Operative Diagnosis		Open text box
E	Case Status	<input type="checkbox"/> Minor <input type="checkbox"/> Elective <input type="checkbox"/> Emergency <input type="checkbox"/> Re- Exploration	
F	Skin Preparation		
G	Wound Class	<input type="checkbox"/> Clean <input type="checkbox"/> Contaminated	

		<input type="checkbox"/> Clean-Contaminated <input type="checkbox"/> Dirty	
H	Findings		
I	Procedure including incision, ligatures, sutures		
J	Blood products	<input type="checkbox"/> PRBC <input type="checkbox"/> FFP <input type="checkbox"/> SDP <input type="checkbox"/> RDP <input type="checkbox"/> Cryoprecipitate	Multiple Choice possible
K	Volume of blood products administered		In Numbers
L	Materials forwarded to Pathology for Examination		
M	Post-Operative Diagnosis		Open text box
7 Intra-Operative findings			
A	Site		
B	Surgical Staging		
i	T		
ii	N		
iii	M		
C	Blood loss (ml)		
D	Frozen section	<input type="checkbox"/> Yes <input type="checkbox"/> No	Row 7E to be enabled only when the response to row 7D is Yes
E	Frozen Section report		In future, ability to link with Synoptic reports of Pathology
F	Resection Status	<input type="checkbox"/> R0 <input type="checkbox"/> R1 <input type="checkbox"/> R2	
G	Margins	<input type="checkbox"/> Clear <input type="checkbox"/> Involved <input type="checkbox"/> Wide <input type="checkbox"/> Planned Close <input type="checkbox"/> Controlled contaminated <input type="checkbox"/> R2 <input type="checkbox"/> Spillage <input type="checkbox"/> Debulking	
H	Drains	<input type="checkbox"/> Closed Suction	

		<input type="checkbox"/> Abdominal, Specify location and location ____ <input type="checkbox"/> Chest <input type="checkbox"/> Corrugated	
I	Intraoperative Course	<input type="checkbox"/> Uneventful <input type="checkbox"/> Complicated	
J	Intent of Procedure	<input type="checkbox"/> Curative <input type="checkbox"/> Non-Curative	
K	Intra Operative complication(s)	<input type="checkbox"/> None <input type="checkbox"/> Nerve Injury <input type="checkbox"/> Vascular Injury <input type="checkbox"/> Organ Injury <input type="checkbox"/> Haemorrhage <input type="checkbox"/> Others, Specify	Multiple Choice possible
L	Details of Complications		Open text box
M	Intra-op referral	<input type="checkbox"/> Yes <input type="checkbox"/> No	
N	If yes, Specify		Row 7N to be enabled only when the response to row 7M is Yes
O	Tumour Size (in mm or cm)		
P	Location of tumor		
Q	Post Op Antibiotic protocol		
Go to OT Part E: Anaesthesia Management			

7. OT- Part E: Anaesthesia Management

Anaesthesia Management			
Sno	Data Elements	Clinician's Response	Remarks for Vendors
1	Primary Details		
A	Case No		
B	Name		Auto Populate based on case number
C	Age/ Sex		Auto Populate based on case number

D	Height		Open text box
E	Weight		Open text box
G	Ward/Bed		Auto Populate based on case number
H	Unit Name		Auto Populate based on case number
I	Treating Doctor		Auto Populate based on case number
2 Pre-Induction Assessment			
A	Surgery		
B	ASA Status	<input type="checkbox"/> I <input type="checkbox"/> II <input type="checkbox"/> III <input type="checkbox"/> IV <input type="checkbox"/> V <input type="checkbox"/> VI <input type="checkbox"/> E	Auto-populate from PAC/Option to Choose
C	Aspiration Risk	<input type="checkbox"/> No <input type="checkbox"/> Yes	Auto-populate from OT Part C- Surgical checklist (Row 2J)
D	Blood Confirmed	<input type="checkbox"/> Yes <input type="checkbox"/> Not Applicable	Auto-populate from OT Part C- Surgical checklist (Row 2D)
E	Type of surgery	<input type="checkbox"/> Elective <input type="checkbox"/> Urgent <input type="checkbox"/> Emergency	Auto-populate from OT Module
F	Anaesthesia machine check	<input type="checkbox"/> Yes <input type="checkbox"/> No	Auto-populate from OT Part C- Surgical checklist (Row 2G)
G	Informed Consent	<input type="checkbox"/> Standard <input type="checkbox"/> High Risk	
H	Premedication	<input type="checkbox"/> Anxiolytic <input type="checkbox"/> Antisialagogue <input type="checkbox"/> Analgesic <input type="checkbox"/> Others	Multiple choice possible. Open text box for name of the drugs, route and dose.
I	BP		Numeric fields. Should flag if BP is less than 90/50 or higher than 180/110. Option to override with a justification.
J	RR		Numeric fields. Should flag if RR is less than 10 and more than 20. Option to override with a justification.
K	PR		Numeric fields. Should flag if PR is less than 50 and more

			than 120. Option to override with a justification.
L	SpO2		Numeric fields. Should flag if SpO2 is less than 95. Option to override with a justification.
M	Temp		Numeric fields. Should flag if temp is greater than 100 degree C. Option to override with a justification.
N	Consciousness status	<input type="checkbox"/> Normal <input type="checkbox"/> Obtunded <input type="checkbox"/> Unconscious	
3 Mode of Anaesthesia			
A	Mode of Anaesthesia	<input type="checkbox"/> General <input type="checkbox"/> Regional <input type="checkbox"/> Both (General + Regional) <input type="checkbox"/> MAC	Select one. 3B/3C/3D will open as per the selection in 3A
B	General Anaesthesia	<input type="checkbox"/> GA <input type="checkbox"/> GA + Regional <input type="checkbox"/> GA following a failed Spinal Anaesthesia/ Epidural	
C	Regional Anaesthesia	<input type="checkbox"/> Spinal <input type="checkbox"/> Epidural <input type="checkbox"/> Combined Spinal Epidural <input type="checkbox"/> Peripheral Nerve Block <input type="checkbox"/> Fascial Plane Block <input type="checkbox"/> IVRA <input type="checkbox"/> Others	Multiple Options possible. To open up further modules as per the option
D	MAC	<input type="checkbox"/> LA+ Monitoring <input type="checkbox"/> Conscious Sedation	
4 Monitoring			
			Multiple choice Possible, Option to add more time and value columns as per the monitoring done. Value column should have open text box.

SNo	Particulars	Time	Value	Time	Value
A	O2				
B	Monitors Connected- ECG NIBP SPO2 ETCO2 Temp Pulse BP Others_____				
C	N2O/Air				
D	Inhalation Agent				
E	IV Fluid				
F	Urine O/P				
G	Blood SNo				

5	IV Access	<input type="checkbox"/> Pre- Induction <input type="checkbox"/> post-induction, Reason_____	
		<input type="checkbox"/> Peripheral <input type="checkbox"/> Central	
A	Peripheral Lines- Sites, Gauge		
B	Central Line		
i	Site	<input type="checkbox"/> Internal Jugular Vein <input type="checkbox"/> Subclavian Vein <input type="checkbox"/> Femoral vein	Choose one
ii	Size	<input type="checkbox"/> 5F <input type="checkbox"/> 7F <input type="checkbox"/> Others, Specify_____	
iii	No of attempts		In number
iv	Issues, if any		Free text
6	Arterial Line		
i	Site	<input type="checkbox"/> Radial <input type="checkbox"/> Dorsalis Pedis <input type="checkbox"/> Femoral	
ii	Laterality		
iii	Size- G	<input type="checkbox"/> 20 <input type="checkbox"/> 22 <input type="checkbox"/> 24	
iv	Technique	<input type="checkbox"/> Standard Canula <input type="checkbox"/> Seldinger	

v	No of attempts		
vi	Issues, if any		
<p>Following sections to open up as per the response to subsection 3 I General Anaesthesia to open, if the response to 3A is General II Regional Anaesthesia to open, if the response to 3A is Regional Both I and II to open, if the response to 3A is Both III Local Anaesthesia to open, if the response to 3A is MAC</p>			
I	GENERAL ANAESTHESIA		
A	Time of Induction		Open text box
B	Preoxygenation	<input type="checkbox"/> Yes <input type="checkbox"/> No	
C	Induction	<input type="checkbox"/> Intravenous <input type="checkbox"/> Inhalational	
D	Intubation response prevention	<input type="checkbox"/> Opioids <input type="checkbox"/> NTG <input type="checkbox"/> Lignocaine <input type="checkbox"/> Esmolol <input type="checkbox"/> Labetalol <input type="checkbox"/> Other, Specify____	
E	Intravenous-Opioids	<input type="checkbox"/> Fentanyl, Dose____ <input type="checkbox"/> Morphine, Dose____ <input type="checkbox"/> Tramadol, Dose____ <input type="checkbox"/> Other, Specify____	
F	Intravenous Induction Agent	<input type="checkbox"/> Propofol, Dose____ <input type="checkbox"/> Ketamine, Dose____ <input type="checkbox"/> Etomidate, Dose____ <input type="checkbox"/> Thiopentone, Dose____ <input type="checkbox"/> Other, Specify____	
G	Carrier Gas Composition	<input type="checkbox"/> Air Oxygen <input type="checkbox"/> N2O+ O2	
H	Inhalation Agent	<input type="checkbox"/> Isoflurane <input type="checkbox"/> Sevoflurane	
I	Muscle Relaxant 1- Intubation	<input type="checkbox"/> Succinyl Choline, Dose____ <input type="checkbox"/> Rocuronium, Dose____ <input type="checkbox"/> Vecuronium, Dose____ <input type="checkbox"/> Atracurium, Dose____ <input type="checkbox"/> Cis- Atracurium, Dose____	Multiple choice possible
L	Muscle Relaxant 2- for Maintenance	<input type="checkbox"/> Succinyl Choline, Dose____ <input type="checkbox"/> Rocuronium, Dose____	Single choice possible

		<input type="checkbox"/> Vecuronium, Dose_____ <input type="checkbox"/> Atracurium, Dose_____ <input type="checkbox"/> Cis- Atracurium, Dose_____	
N	Airway and Oxygen delivery devices	<input type="checkbox"/> ETT <ul style="list-style-type: none"> • Standard • Preformed • Double Lumen • With bronchial blocker <input type="checkbox"/> SGD <ul style="list-style-type: none"> • Supreme • Auragain • iGel • Proseal • Others, Specify_____ <input type="checkbox"/> Face Mask <input type="checkbox"/> Nasal Prongs <input type="checkbox"/> Hudson Mask <input type="checkbox"/> Rigid bronchoscope <input type="checkbox"/> Tracheostomy tube	Single choice possible. Further drop downs to appear under ETT and SGD.
1 Mode of Intubation			
A	Intubation	<input type="checkbox"/> Awake <input type="checkbox"/> GA+ Muscle Relaxant <input type="checkbox"/> GA+ Spont. Ventilation <input type="checkbox"/> Pre-Op Tracheostomy (LA) <input type="checkbox"/> Not Applicable	
B	Method of Intubation	<input type="checkbox"/> Video Laryngoscope- C Blade <input type="checkbox"/> Video Laryngoscope- D Blade <input type="checkbox"/> Standard Laryngoscope <input type="checkbox"/> Flexible Bronchoscope <input type="checkbox"/> Others	
C	Route	<input type="checkbox"/> Nasal <input type="checkbox"/> Oral <input type="checkbox"/> Tracheostomy	
D	CL Grade	<input type="checkbox"/> 1 <input type="checkbox"/> 2A <input type="checkbox"/> 2B <input type="checkbox"/> 3 <input type="checkbox"/> 4	

E	Percentage of Glottic Opening (POGO)	<input type="checkbox"/> 0 <input type="checkbox"/> 25 <input type="checkbox"/> 50 <input type="checkbox"/> 75 <input type="checkbox"/> 100	
F	Adjuncts	<input type="checkbox"/> Bougie <input type="checkbox"/> Stylet <input type="checkbox"/> Others, Specify ____	
G	Number of Attempts		In numbers
H	Number of Operators		In numbers
I	Complications	<input type="checkbox"/> Desaturation less than 90% <input type="checkbox"/> Significant trauma <input type="checkbox"/> Aspiration of stomach contents <input type="checkbox"/> Aspiration of Blood <input type="checkbox"/> Others	
2 Maintenance			
A	Inhalational Maintenance	<input type="checkbox"/> Oxygen+ Nitrous Oxide+ Volatile Agent <input type="checkbox"/> Oxygen + Air + Volatile Agent	
B	Intravenous Maintenance- TIVA	<input type="checkbox"/> TCI <input type="checkbox"/> Non-TCI	
C	Details of TIVA/Inhalation	<input type="checkbox"/> Propofol <input type="checkbox"/> Dexmedetomidine <input type="checkbox"/> Remifentanyl <input type="checkbox"/> Others, Specify ____	
D	Breathing system	<input type="checkbox"/> Circle Absorber <input type="checkbox"/> Jackson Rees <input type="checkbox"/> Magill's <input type="checkbox"/> Bains	
E	Ventilator Mode	<input type="checkbox"/> Spontaneous <input type="checkbox"/> Pressure Support <input type="checkbox"/> Volume Control <input type="checkbox"/> Pressure Control <input type="checkbox"/> Others, Pls Specify	
F	Non-Opiod Analgesic Drugs	<input type="checkbox"/> Paracetamol, Dose ____ <input type="checkbox"/> Diclofenac, Dose ____ <input type="checkbox"/> Others, Pls specify ____	Multiple choice possible

G	Antiemetic Drug	<input type="checkbox"/> Metoclopramide, Dose____ <input type="checkbox"/> Ondansetron, Dose____ <input type="checkbox"/> Dexamethasone, Dose____ <input type="checkbox"/> Others, Pls specify____	Multiple choice of drug possible with dose of each drug
3 Ventilation Settings			
A	Tidal volume or preset pressure		Flag for more than 8ml/Kg Ideal body weight and less than 6 ml/kg/ Ideal body weight with an option to override with justification.
B	Rate/Minute		In Numbers
C	I:E Ratio		In Numbers
D	PEEP in cm H2O		In Numbers
E	Airway pressure cm H2O		In Numbers
F	ETCO2 mm Hg		In Numbers
G	Gas Scavenging	<input type="checkbox"/> Yes <input type="checkbox"/> No	
II REGIONAL ANAESTHESIA			
		<input type="checkbox"/> Spinal <input type="checkbox"/> Epidural <input type="checkbox"/> Combined Spinal Epidural <input type="checkbox"/> Peripheral Nerve Block <input type="checkbox"/> Fascial Plane Block <input type="checkbox"/> IVRA <input type="checkbox"/> Others, _____	Individual Modules to open up depending on the options selected.
	Regional anaesthesia	<input type="checkbox"/> Asleep <input type="checkbox"/> Awake	
1 SPINAL			
A	Posture	<input type="checkbox"/> Lateral <input type="checkbox"/> Sitting	
B	Needle type		
C	Size		
D	Site of Insertion	<input type="checkbox"/> L3-L4 <input type="checkbox"/> L4-L5 <input type="checkbox"/> Others	
E	Approach	<input type="checkbox"/> Median <input type="checkbox"/> Para median	
F	Number of attempts		
G	Number of operators		

H	Time	<input type="checkbox"/> Start of surgery <input type="checkbox"/> End of Surgery	
I	Local Anaesthetic		
J	Concentration		
K	Volume		
L	Adjuvants Drug and dose		
M	Spinal Catheter	<input type="checkbox"/> Yes, Specify____ <input type="checkbox"/> No	
N	Extent of Block	<input type="checkbox"/> Checked, Details of level____ <input type="checkbox"/> Not checked	
O	Complications, If any	<input type="checkbox"/> No action <input type="checkbox"/> Inadequate action <input type="checkbox"/> High Spinal <input type="checkbox"/> Total Spinal <input type="checkbox"/> Severe hypotension <input type="checkbox"/> Others, _____	
P	Any other comments		
2 Epidural			
A	Posture	<input type="checkbox"/> Lateral <input type="checkbox"/> Sitting	
B	Needle type		
C	Size		
D	Site of Insertion	<input type="checkbox"/> Lumbar, Details_____ <input type="checkbox"/> Thoracic, Details_____ <input type="checkbox"/> Others, Details_____	Free text in Details
E	Approach	<input type="checkbox"/> Median <input type="checkbox"/> Para median	
F	Technique	<input type="checkbox"/> Intermittent <input type="checkbox"/> LOR- Loss of Resistance to Air <input type="checkbox"/> Intermittent LOR to Saline <input type="checkbox"/> Continuous Saline technique <input type="checkbox"/> Hanging drop <input type="checkbox"/> Others, Pls Specify_____	Single Choice possible
G	Depth of epidural space from skin		In Numbers
H	Depth of catheter insertion		
I	Number of attempts		

J	Number of operators		
K	Time	<input type="checkbox"/> Start of surgery <input type="checkbox"/> End of Surgery	
L	Test dose	<input type="checkbox"/> For Intrathecal, drug and dose____ <input type="checkbox"/> For Intravascular, drug and dose____ <input type="checkbox"/> Positive, details____ <input type="checkbox"/> Negative	Multiple options with free text in drug and dose
M	Local Anaesthetic		
N	Concentration		
O	Volume		
P	Loading dose		
Q	Infusion		
R	Adjuvants Drug and dose		
S	Extent of Block	<input type="checkbox"/> Checked, Details of level____ <input type="checkbox"/> Not checked	
T	Complications, If any	<input type="checkbox"/> Dural puncture <input type="checkbox"/> Bloody tap <input type="checkbox"/> Severe neurological symptoms <input type="checkbox"/> Abandoned <input type="checkbox"/> Others, specify_____	
U	Any other comments		
3	Combined Spinal Epidural		Open both the above section 1 and section 2 along with below details
A	Technique	<input type="checkbox"/> Spinal followed by Epidural <input type="checkbox"/> Epidural followed by spinal	Choose one
4	Peripheral Nerve Block		
A	Name of block	<input type="checkbox"/> Brachialplexus, Details__ <ul style="list-style-type: none"> • Interscalene • Supraclavicular • Axillary <input type="checkbox"/> Other Upper limb blocks, Details__ <input type="checkbox"/> Femoral, Details____ <input type="checkbox"/> Sciatic, Details____ <input type="checkbox"/> Other Lower limb blocks, Details____	Multiple choice possible

		<input type="checkbox"/> Others, Specify____	
B	Posture	<input type="checkbox"/> Lateral <input type="checkbox"/> Sitting	Single choice Possible
C	Laterality	<input type="checkbox"/> Right <input type="checkbox"/> Left <input type="checkbox"/> Bi- lateral	
D	Technique	<input type="checkbox"/> USG Guided <input type="checkbox"/> Nerve stimulator guided <input type="checkbox"/> Landmark technique	Multiple choice possible
E	Needle type		
F	Size		
G	Site of Insertion		
H	Time	<input type="checkbox"/> Start of surgery <input type="checkbox"/> End of Surgery	
I	Local Anaesthetic		
J	Concentration		
K	Volume		
L	Adjuvants Drug		
M	Concentration		
N	Volume		
O	Catheter	<input type="checkbox"/> Yes, Details____ <input type="checkbox"/> No	
P	Extent of Block	<input type="checkbox"/> Checked, Details of level____ <input type="checkbox"/> Not checked	
Q	Complications, if any		
R	Any other comments		
4 Fascial Plane Block			
A	Name of Fascial block	<input type="checkbox"/> Thoracic, details____ <input type="checkbox"/> Abdominal, details____ <input type="checkbox"/> Others, Specify____	Multiple choice possible with details of each option
B	Laterality	<input type="checkbox"/> Right <input type="checkbox"/> Left <input type="checkbox"/> Bi-lateral	
C	Posture	<input type="checkbox"/> Lateral <input type="checkbox"/> Sitting	Single choice Possible
D	USG Guided	<input type="checkbox"/> Yes <input type="checkbox"/> No	
E	Needle type		
F	Size		
G	Time	<input type="checkbox"/> Start of surgery	

		<input type="checkbox"/> End of Surgery	
H	Local Anaesthetic		
I	Concentration		
J	Volume		
K	Adjuvants Drug		
L	Concentration		
M	Volume		
N	Catheter	<input type="checkbox"/> Yes <input type="checkbox"/> No	
O	Extent of Block	<input type="checkbox"/> Checked, Details of level____ <input type="checkbox"/> Not checked	
P	Complications, if any		
5 IVRA			
A	Site	<input type="checkbox"/> Upper limb <input type="checkbox"/> Lower limb	
B	Duration in minutes		
C	Local Anaesthetic Name		
D	Concentration		
E	Volume		
F	Adjuvants Drug		
G	Concentration		
H	Volume		
I	Extent of Block		
J	Complications, if any		
III MAC			
1 Local Anesthetic			
A	Name of Drug		
B	Concentration		
C	Volume		
D	Route	<input type="checkbox"/> Infiltration <input type="checkbox"/> Topical application <input type="checkbox"/> Others, Specify_____	
2 Additives			
A	Name of Drug		
B	Concentration		
C	Volume		

3 Sedatives			
A	Name of Drug	<input type="checkbox"/> Propofol, Dose____ <input type="checkbox"/> Ketamine, Dose____ <input type="checkbox"/> Midazolam, Dose____ <input type="checkbox"/> Fentanyl, Dose____ <input type="checkbox"/> Dexmedetomidine, Dose__	Multiple choice possible
B	Ramsay Sedation Scale	Choose from number 1-6	
C	Oxygen supplementation	<input type="checkbox"/> No <input type="checkbox"/> Nasal Prongs <input type="checkbox"/> Facemasks <input type="checkbox"/> Others, Specify____	
4	Complications	<input type="checkbox"/> Emergency Airway intervention needed, Details_ <input type="checkbox"/> Conversion to GA, Details____ <input type="checkbox"/> Others, Specify	
Below portion will be common			
7	Patient Position	<input type="checkbox"/> Supine <input type="checkbox"/> Supine with extension of head <input type="checkbox"/> Supine with Lithotomy <input type="checkbox"/> Trendelenberg <input type="checkbox"/> Reverse Trendelenberg <input type="checkbox"/> Prone <input type="checkbox"/> Semi Prone <input type="checkbox"/> Right lateral <input type="checkbox"/> Left lateral <input type="checkbox"/> Others, Specify____	Multiple Choice possible
8	Pressure areas padded	<input type="checkbox"/> Yes <input type="checkbox"/> No	
9	Eyes shut and taped	<input type="checkbox"/> Yes <input type="checkbox"/> No	
10	Maintenance of Normothermia	<input type="checkbox"/> None <input type="checkbox"/> Inline Fluid Warmer <input type="checkbox"/> Warming Blanket <input type="checkbox"/> Warming Mattress <input type="checkbox"/> Others, Specify____	
11	Temperature Monitoring	<input type="checkbox"/> None <input type="checkbox"/> Skin	

		<input type="checkbox"/> Nasopharyngeal <input type="checkbox"/> Oro-esophageal <input type="checkbox"/> Other core, Specify _____		
12	Total Input			
i	IV Fluids		Multiple choice possible. Mention Volume for each option selected	
IV Fluids		Volume (ML)		
<input type="checkbox"/> Ringer Lactate <input type="checkbox"/> Normal Saline <input type="checkbox"/> Dextrose Normal Saline <input type="checkbox"/> 5% Dextrose <input type="checkbox"/> 10% Dextrose <input type="checkbox"/> Plasmalyte <input type="checkbox"/> Gelofusine <input type="checkbox"/> Albumin 20% <input type="checkbox"/> Albumin 5% <input type="checkbox"/> Mannitol 20% <input type="checkbox"/> 1% DRL <input type="checkbox"/> 2% DRL <input type="checkbox"/> Others				
ii	Blood/Blood Products/Coagulation Products		Multiple Choice Possible. Mention Volume, Bag No, Reaction for each option selected	
Blood/ Blood Products/Coagulation products	Volume (ml)	Bag No	Reaction	Reaction details
<input type="checkbox"/> Whole Blood <input type="checkbox"/> Packed Cells <input type="checkbox"/> FFP <input type="checkbox"/> Cryoprecipitate <input type="checkbox"/> Random Donor Platelets <input type="checkbox"/> Single Donor Platelets <input type="checkbox"/> Tranexamic Acid <input type="checkbox"/> Others, Pls Specify			<input type="checkbox"/> Yes <input type="checkbox"/> No	To appear only if the response to Reaction is 'Yes'. Provide Open text box.

13 Total Output			
A	Blood loss		
B	Urine Output		
C	Other Losses		
14	Intra-Op Complications	<input type="checkbox"/> Airway related <input type="checkbox"/> Cardiovascular <input type="checkbox"/> Respiratory <input type="checkbox"/> Hemaorrhagic <input type="checkbox"/> CNS <input type="checkbox"/> Dyselectrolytemia <input type="checkbox"/> Other Metabolic <input type="checkbox"/> Others, Pls Specify____	Multiple option, Details of each option
15 End Op Notes			
A	Reversal at-Time		
B	Reversal Drug	<input type="checkbox"/> Neostigmine and Glycopyrrolate, dose____ <input type="checkbox"/> Sugamadex, dose____ <input type="checkbox"/> None	
C	Reversal Dose		
D	Extubation	<input type="checkbox"/> Uneventful <input type="checkbox"/> Needed Reintubation <input type="checkbox"/> Not extubated	
E	End Op Spinal Anaesthesia Level		
F	Post Op Ventilation	<input type="checkbox"/> No <input type="checkbox"/> Planned <input type="checkbox"/> Unplanned	
G	Vasoactive Drugs at end of surgery	<input type="checkbox"/> Adrenaline <input type="checkbox"/> Nor- Adrenaline <input type="checkbox"/> Dobutamine <input type="checkbox"/> Vasopressin <input type="checkbox"/> Amiodarone <input type="checkbox"/> NTG <input type="checkbox"/> Labetalol <input type="checkbox"/> Esmolol <input type="checkbox"/> Others, Pls Specify	With infusion rates in a table format. Multiple choice possible
H	Post Extubation Complications	<input type="checkbox"/> Laryngospasm <input type="checkbox"/> Bronchospasm	

		<input type="checkbox"/> Upper airway obstruction <input type="checkbox"/> Hypoventilation <input type="checkbox"/> Hypopnoea <input type="checkbox"/> Others, Pls Specify													
16 End Op Vital Parameters															
A	Patient Condition	<input type="checkbox"/> Patient fully awake and obeys commands <input type="checkbox"/> Patient sleepy but unobstructed airway <input type="checkbox"/> Sedated on Ventilator support													
B	Vitals														
<table border="1"> <thead> <tr> <th>Vitals</th> <th>Parameter</th> </tr> </thead> <tbody> <tr> <td>PR</td> <td></td> </tr> <tr> <td>BP</td> <td></td> </tr> <tr> <td>SpO2</td> <td></td> </tr> <tr> <td>RR</td> <td></td> </tr> <tr> <td>Temperature</td> <td></td> </tr> </tbody> </table>				Vitals	Parameter	PR		BP		SpO2		RR		Temperature	
Vitals	Parameter														
PR															
BP															
SpO2															
RR															
Temperature															
C	Post Extubation Complications	<input type="checkbox"/> Laryngospasm <input type="checkbox"/> Bronchospasm <input type="checkbox"/> Upper airway obstruction <input type="checkbox"/> Hypoventilation <input type="checkbox"/> Hypopnoea <input type="checkbox"/> Others,Specify___													
D	Patient shifted with following airway adjuncts	<input type="checkbox"/> Endotracheal tube <input type="checkbox"/> Tracheostomy tube <input type="checkbox"/> Oropharyngeal airway <input type="checkbox"/> Nasopharyngeal airway <input type="checkbox"/> None of the above	Single choice Possible												
E	Level of post op monitoring	<input type="checkbox"/> Routine <input type="checkbox"/> High Dependency <input type="checkbox"/> Intensive care													
17 Post Operative Advice															
A	Oxygen Supplementation	<input type="checkbox"/> Yes <input type="checkbox"/> No													
B	NPO For	_____ Hours													
C	IVF- Maintenance	_____ ml/hour													

D	Analgesics Orders		
E	Antiemetics given		
F	Pre-op Chronic Medications		
G	Investigations	<input type="checkbox"/> CBC <input type="checkbox"/> Electrolytes <input type="checkbox"/> Biochemistry <input type="checkbox"/> Coagulation <input type="checkbox"/> Thromboelastogram (TEG) <input type="checkbox"/> Xray <input type="checkbox"/> ECG <input type="checkbox"/> Others, Pls Specify_____	
H	Other Comments		
Go to OT Part F: Post Operative Complication			

8. OT Part F: Post Operative Complication

Post Operative Complications			
SNo	Data Elements	Clinician's Response	Remarks for Vendors
A	Unit Name		This module will be avail for OP and IP
B	Post Op Complications	<input type="checkbox"/> Yes <input type="checkbox"/> No	Further drop downs to appear only if User chooses 'Yes'
C	Complication/s		Multiple choice possible. Map the list of complications mentioned as per the Unit Name (Appendix 2). Provide an option of Others too. Row D and E to repeat for each complication.
D	Describe the complications and write the grade if applicable		Open text box
E	Clavien Dindo Grading of complication	<input type="checkbox"/> Grade 1 <input type="checkbox"/> Grade 2 <input type="checkbox"/> Grade 3	Scale to be mapped

		<input type="checkbox"/> Grade 3a <input type="checkbox"/> Grade 3b <input type="checkbox"/> Grade 4 <input type="checkbox"/> Grade 4a <input type="checkbox"/> Grade 4b <input type="checkbox"/> Grade 5	
F	30 Day Re-Admission	<input type="checkbox"/> Yes <input type="checkbox"/> No	Auto Calculate/ Populate from date of last discharge
G	30 Day Mortality	<input type="checkbox"/> Yes <input type="checkbox"/> No	Auto Calculate/ Populate from admission and death records
H	90 Day Re-Admission	<input type="checkbox"/> Yes <input type="checkbox"/> No	Auto Calculate/ Populate from date of last discharge
I	90 Day Mortality	<input type="checkbox"/> Yes <input type="checkbox"/> No	Auto Calculate/ Populate from admission and death records
Go to OT Part G: Diagrammatic Template			

9. OT Part G: Diagrammatic Template

Diagrammatic Template				
SNo	Data Elements	Clinician's Response	Remarks for Vendors	
1	Case Number		Auto Populate	
2	Name		Auto Populate	
3	Age/Sex		Auto Populate	
4	Ward/Bed		Auto Populate	
5	Unit Name		Auto Populate	
6	Treating Doctor		Auto Populate	
	Document Type	Name	Remarks	To upload any picture/Image/Reports/Short Clips/Videos etc

[Go to OT Part H: Log Book](#)

10. OT Part H: Log Book

Log Book											
SNo	Data Elements					Clinician's Response				Remarks for Vendors	
1	Case Number										
2	Name									Auto Populate	
3	Age/Sex									Auto Populate	
4	Unit Name									Auto Populate	
5	Treating Doctor									Auto Populate	
Sno	Date of surgery	Name	Age	Sex	Case No	Diagnosis	Procedure	Unit Name	Name of the Surgeon	Status of the Surgeon	Nature of the Surgery
										Primary/Assistant	
Go to OT Part I: Reports											

11. OT Part I: Reports

Reports				
SNo	Data Elements		Clinician's Response	Remarks for Vendors
A	From Date			Provide filter options to download the report for the clinician

B	To Date		Provide filter options to download the report for the clinician									
C	Name of Surgeon		To map as per NCG Center									
D	Unit Name		To map as per NCG Center									
Sno	Operation Date	Patient Name	Case No	Age	Sex	Preoperative Diagnosis	Postoperative Diagnosis	Procedure	Unit Name	Name of the Surgeon	Status/Category	Case Status
											A	
											B	

Appendices

Appendix 1- Glossary of terms

Abbreviations	
NCG	National Cancer Grid
EMR	Electronic Medical Record
NER	NCG EMR Requirements
LEAP	Leading EMR Adoption Program
OT	Operation Theatre
Pre Op	Pre-operative
End OP	End-operative
Post OP	Post – operative
RR	Respiratory Rate
BP	Blood Pressure
PR	Pulse Rate
SpO2	Peripheral oxygen saturation
Ht	Height
Wt	Weight
HBsAg	Hepatitis B surface antigen
HIV	Human Immunodeficiency Virus
HCV	Hepatitis C Virus
PM-JAY	Pradhan Mantri Jan Arogya Yojana

PAC	Pre-Anaesthesia check
HPR	Histopathological report
GA	General Anaesthesia
RA	Regional Anaesthesia
MAC	Monitored anaesthesia care
ICU	Intensive Care Unit
ASA	American Society of Anaesthesiologists
NIRS	Near-infrared spectroscopy
TEE	Transoesophageal echocardiography
CL Grade	Cormack–Lehane (CL)
TIVA	Total intravenous anaesthesia
TCI	Target Controlled Infusion (TCI)
ETCO2	End-tidal carbon dioxide
FFP	Fresh frozen plasma
DRL	Dextrose in Ringer Lactate
IVRA	Intravenous regional anaesthesia
PACU	Post Anaesthesia Care Unit
FS	Fractional shortening
RV	Residual volume
NTG	Nitroglycerin
FiO2	Fraction of inspired oxygen
O2	Oxygen
N2O	Nitrous oxide
ETT	Endotracheal Tube.
SGD	Supraglottic device
LA	Lateral
PEEP	Positive end-expiratory pressure
OPD	Outpatient Department
CSE	combined spinal-epidural
NPO	Nil by mouth

Appendix 2- Reference documents

1. List of Surgeries- [Types of Surgery - Google Sheets](#)
2. List of Complications (OT Part F- Post Operative Complications)- [List of Post Op Complications.xlsx - Google Sheets](#)