NCG-KCDO EMR Requirement (NER)-Pre-Anaesthesia Check Up 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, the pre anaesthesia check-up module has been developed. This module aims to streamline the process, providing clinicians with the tools they need to deliver optimal care to patients with cancer.

We share the pre-final version of the module and welcome feedback, suggestions and guidance from the 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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Convener, National Cancer Grid
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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 has developed detailed requirements and features in specific areas of oncology including radiotherapy, chemotherapy and surgical oncology. This document details the pre-anaesthesia check-up requirements based on best practices developed at several leading NCG centres.

2. EMR FEATURE BUILDING

A. Pre Anaesthesia Check Up Module Overview

Building on the features outlined in the NER (NCG EMR Requirement), the Pre-Anaesthesia Check-up form is designed to streamline and optimize the treatment process for patients with cancer. The module is designed to enhance the quality, safety, and efficiency of the treatment within the NCG network, ultimately improving outcomes for cancer patients and advancing the field of oncology care.

Key features of the Pre-Anaesthesia Check-up form include:

2.1 Preoperative Evaluation: Physical examination findings including vital signs (blood pressure, heart rate, respiratory rate, and temperature) and assessment of airway, cardiovascular, respiratory, and neurological systems.

2.2 Laboratory and Diagnostic tests: Incorporates results of the relevant laboratory tests and imaging studies.

2.3 Anaesthesia Risk Assessment: Evaluation of anaesthetic risk using standardized scoring systems (e.g., ASA physical status classification).

B. Methodology

The methodology used to build the pain management, PAC and palliative medicine assessment forms within the NER (NCG EMR Requirements) document encompasses a systematic and collaborative approach, involving key stakeholders and leveraging best practices across NCG hospitals.

3. Pre-Anaesthesia Check Up Form

Pre- Anaesthesia Check Up Form (PAC)			
Sno	**Data elements**	**Clinician's Response**	**Remarks for Vendors**
1	**General Details**		
A	Please select one to continue	☐ PAC ☐ Review PAC	
B	Ward		
C	Case Number		
D	Name		Auto populate as per case no
E	Age		Auto populate as per case no
F	Sex		Auto populate as per case no
G	Height		
H	Weight		
I	BMI		Auto Calculate
J	Evaluating Anaesthesiologist		
K	Unit Name		Auto Populate from Surgery Module
L	Treating Doctor		Auto Populate from Surgery Module
M	Name of Procedure		Auto Populate from Surgery Module
N	Date of Surgery		Auto Populate from Surgery Module
O	Nature of Surgery	☐ Urgent ☐ Emergency ☐ Elective	Auto Populate from Surgery Module
2	**Vitals**		
A	Date		Auto populate today's date
B	Temp		Open text box

C	Pulse		Open text box
D	Blood pressure		Open text box
E	Spo2		Open text box
F	Breath Holding Time (in Sec)		Open text box
3	**General Physical Examination**		
A	General Condition	☐ Good ☐ Fair ☐ Poor	
B	Breathing Pattern	☐ Normal ☐ Tachypnoea ☐ Bradypnoea ☐ Obstructed ☐ Noisy Breathing ☐ Stridor	
C	Orientation	☐ Normal ☐ Confused ☐ Very Poor ☐ Agitated	
D	Pallor	☐ Yes ☐ No	
E	Icterus	☐ Yes ☐ No	
F	Cyanosis	☐ Yes ☐ No	
G	Clubbing	☐ Yes ☐ No	
H	Lymphadenopathy	☐ Yes ☐ No	
I	Pedal Edema	☐ Yes ☐ No	
J	LRTI	☐ Yes ☐ No	
K	URTI	☐ Yes ☐ No	
L	Fever	☐ Yes ☐ No	
M	Pre-Anaesthesia Evaluation History	☐ Yes ☐ No	Open text box

4	**Comorbidities and treatment history**		
A	Hypertension		Open text box
B	Diabetes Mellitus		Open text box
C	Cardiac (IHD/CHF/Any other)		Open text box
D	Respiratory (Asthma/ TB/COPD)		Open text box
E	Nervous System (Epilepsy/Stroke/Others)		Open text box
F	Renal (AKI/CKD/Others)		Open text box
G	Thyroid Disorder		Open text box
H	Chemotherapy drugs		Link to Discharge Summary
I	Radiotherapy		Link to Discharge Summary
J	Any H/O Surgeries		Open text box
K	Blood Related (Anaemia, H/O Transfusion/ Disorders)		Open text box
L	Obesity (STOP BANG Questionnaire)	☐ Gender- Male ☐ Neck Circumference>40 cm ☐ Age>50 yrs ☐ BMI>35kg/m2 ☐ High Blood Pressure ☐ Observed Apnoea ☐ Tiredness ☐ Snoring	Multiple choice possible
M	Drug Allergies		Open text box
N	Any other relevant medical history		Open text box
5	**Substance Abuse History**		

		Duration	Remarks
A	Drugs		
B	Alcohol		
C	Betel Nut		
D	Tobacco		
E	Smoking		

6	**Airway Assessment**		
A	Nares	☐ Normal	

		☐ Abnormal	
B	Deviated Nasal Septum	☐ Normal ☐ Right ☐ Left ☐ Post Surgical	
C	Mouth Opening	☐ >4 cm ☐ 3-4 cm ☐ <3 cm	
D	Teeth	☐ Normal ☐ Edentulous ☐ Protruding ☐ Artificial ☐ Buck ☐ Loose tooth	
E	Mallampati	☐ 0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 ☐ NA	
F	Jaw Sliding	☐ +1 ☐ 0 ☐ -1	
G	Thyromental Distance	☐ >7.5 cm ☐ 6-7.5 cm ☐ <6 cm	
H	Neck		Open text box
I	Spine		Open text box
J	Tracheostomy	☐ Yes ☐ No	Open text box
K	Airway Comments (if any other)		Open text box
7	**Systemic Examination**		
A	Cardiovascular System		Open text box
B	Respiratory System		Open text box
C	Abdominal System		Open text box
D	Central Nervous system		Open text box
8	**Investigations and Imaging**		Integrate with the Laboratory Information system and auto

			populate the values
1	Blood group and RH Type		
2	Haemoglobin		
3	Platelet Count		
4	Total Leucocyte Count		
5	Differential Count		
i	Neutrophil Count		
ii	Lymphocyte count		
iii	Absolute Neutrophillic Count		
6	Platelet Count		
7	Liver Function test		
i	Bilirubin (Direct/Indirect)		
ii	SGOT		
iii	SGPT		
iv	ALP		
v	S. Albumin		
vi	S. Globulin		
vii	S. Proteins		
8	Coagulation profile		
i	Bleeding time		
ii	Clotting time		
iii	PT		
iv	INR		
v	aPTT		
vi	TT		
vii	Fibrinogen		
9	CRP		
10	Procal/Lactate		
11	Renal Function test		
i	S. Creatinine		
ii	Blood Urea		
iii	BUN/Uric Acid		
12	S. Electrolytes		
i	Sodium		
ii	Potassium		
iii	Chloride		
iv	Calcium		
v	Magnesium		
vi	Phosphate		

13	RBS		
14	FBS		
15	PPBS		
16	S NT- Pro BNP		
17	Thyroid Profile		
i	Free T3/T4		
ii	Free T4/T4		
iii	TSH		
iv	Anti-TG		
v	Anti-TPO		
18	Viral Markers		
i	HIV		
ii	HBsAg		
iii	HCV		
19	ECG		
20	X-Ray or USG		
21	2 D Echo		
22	Stress test		
23	6 Minute Walk test		
24	Pulmonary Function test		
25	Arterial Blood Gas		
26	CT-Scan or MRI		
27	V/Q Scan		
28	DL Scopy		
9	**Speciality Reference**		
A	Referred to		Map the list as per the NCG center
B	Remarks		Open text box
10	**Status**		
A	ASA Grade	☐ I ☐ II ☐ III ☐ IV ☐ V ☐ VI ☐ E	
B	Fitness Status	☐ Yes with accepted risk ☐ No	

C	Anaesthesia Consent administered	☐ Yes ☐ No	
D	Date		
11	**Anaesthesiologist's Advice & Pre operative Orders**		
A	Anemia Management	☐ Yes ☐ No	Row 11B to be enabled if the response to 11A is yes
B	If Yes, Remarks		Open text box
C	Patient can have clear liquids till 2 hours prior to surgery and solid foods till 8 hours prior to surgery		Insert this line as a printed advice
12	**Approvals**		
A	Anaesthesiologist's Name		
B	Signature		E sign
C	Date		Calendar view/today's date
	End		

4. Appendices

Appendix 1- Glossary of terms

Abbreviations	
NCG	National Cancer Grid
EMR	Electronic Medical Record
NER	NCG EMR Requirements
LEAP	Leading EMR Adoption Program
COPD	Chronic Obstructive Pulmonary Disease
HT	Hypertension
DM	Diabetes Mellitus
IHD	Ischemic Heart Disease
CAD	Coronary Artery Disease
CVA	Cerebrovascular Accident
TB	Tuberculosis
RFT	Renal Function Test
LFT	Liver Function Test
HS	At Bedtime
CRPS	Complex Regional Pain Syndrome
MDT	Multi-Disciplinary Tumor Board
EOLC	End of life care
LRTI	Lower Respiratory Tract Infection
URTI	Upper Respiratory Tract Infection

Appendix 2- NER Document

1. ncg-emr-requirements-ner.pdf (kcdo.in)