NOCA IRISH NATIONAL ICU AUDIT (INICUA) DATA COLLECTION & SUPPORT MANUAL

INICUA DATASET V4.0 SOFTWARE UPDATE

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Introduction
The Irish National ICU Audit (INICUA) dataset on InfoFlex contains both the ICNARC and NOCA dataset. The ICNARC dataset is defined within the ICNARC Data Collection Manual for Ireland INICUA V 4.0 (Version 4.0 ICMPDS / 08 March 2023 / Doc.version 4.0.3). When referencing the ICNARC dataset in this manual, we will refer to the appropriate page number within the definition column.

ICNARC data items
To identify an ICNARC data item within InfoFlex, click into the data entry box beside the item you wish to query, and press F1 on top left corner of your keyboard. If it is an ICNARC data item, the definition from the ICNARC manual will be visible.

NOCA data items
The NOCA dataset items specific for Ireland are in red text and defined within this document.

NOCA National Office of Clinical Audit

ICU Irish National ICU Audit

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InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Patient Demographics	**Patient Demographics**		
	M.R.N.	**FAQ**	This is the Hospital Medical Record Number which identifies an individual patient's record within the Patient Admission System (PAS) in the hospital
	Surname		As per the individual patients notes within the PAS in the hospital
	Forename		As per the individual patients notes within the PAS in the hospital
	Date of Birth		If date of birth is unobtainable, use judgement to estimate age at admission ICNARC Data Collection Manual p49
	Estimated age	**FAQ**	ICNARC Data Collection Manual p49
	Sex	Drop-down list (2)	ICNARC Data Collection Manual p138
	County/Dublin Area Code or Country if not ROI patient or No Country/Dublin area code (Tick box).		ICNARC Data Collection Manual p45 Dublin Area Code e.g., Dublin 6 or County. Country if outside ROI
	Local Unique Patient Identifier (UID)	Automatically generated	Automatically generated by InfoFlex. A Unique Identifier is generated for each new MRN within InfoFlex. This unique number is extracted to ICNARC and allows recognition of an admissions return to your unit
	NOCA Ethnicity	Ethnicity Drop down list (8) If any other Ethnic group enter free text	Ethnic group refers to the way an individual views her/himself and is a mixture of culture, religion, skin colour, language, their origins, and the origins of their family Ethnicity is not the same as nationality and should be recorded as seen
	Country of Birth if known or Country of Birth Unknown (Tick Box)	Country Drop-down list	Enter the country of birth (not nationality) e.g., Ireland or Poland

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Admission	**Admission**		
	Episode Number	**FAQ**	This Hospital Identification Number identifies an individual episode of care. This is not used in all hospitals and not a mandatory field
	Date and time of admission to your hospital		ICNARC Data Collection Manual p56
	Admitted to your hospital via your ED	Drop-down (2)	ICNARC Data Collection Manual p9
	Date and time of registration at your ED		ICNARC Data Collection Manual p62
	Admitted to your unit from common routes	Drop-down (10)	ICNARC Data Collection Manual p13
	Transferred to your Unit via	Drop-down (10)	ICNARC Data Collection Manual p10
	Transferred to your Unit from	Drop-down (4)	ICNARC Data Collection Manual p149
	Date and time of decision to admit to your unit		ICNARC Data Collection Manual p59
	Date and time of decision to admit to your unit missing		ICNARC Data Collection Manual p59
	Date and time of admission to your unit		ICNARC Data Collection Manual p57
	Weekend/ bank holiday admission?		17:00 Fri to 08:00 Mon + 08:00-08:00 Bank Holiday. If a patient arrives within the hours stated above on a weekend or Bank Holiday, please tick the box to confirm or **X** if not applicable
	Admission Number (ADNO)		Automatically generated by InfoFlex. A unique number assigned to each admission to your unit. Begins with year of admission and includes a sequential number i.e., 20220001. ICNARC Data Collection Manual p8
	Readmitted	**FAQ**	Readmitted to this Unit during the same hospital stay. Please tick the box to confirm or **X** if not applicable
	Readmitted >48hrs or <48hrs during the same hospital stay	Drop-down list (2)	Select >48 hours if readmitted to your Unit more than 48 hours from most recent Unit discharge date and time. Select <48 hours if readmitted to your Unit less than 48 hours from most recent Unit discharge date and time

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Admission	Readmission Source	Drop-down list (2)	Select Readmission from HDU if patient readmitted to ICU from your HDU. Select Readmission from outside Critical Care if patient readmitted from any other area in your hospital outside Critical Care (as defined locally)
	Reason for Intensive Care Medicine referral		Free text box. Use of this field can be agreed locally
	Admitted to the hospital from	Drop-down (6)	Source of admission to this hospital
	Specify Hospital	Drop-down	Name of transferring hospital from dropdown list on InfoFlex
	NOCA specialty / Primary specialty treated under prior to admission to your Unit	**FAQ**	NOCA /Primary specialty depending on admitted to your Unit from (Common routes). Intensive Care Medicine /Anaesthesia is not a specialty in ROI. ICNARC Data Collection Manual p108
	Consultant	Drop-down list (copy of your local hospital consultant list on InfoFlex)	Name of the primary Consultant responsible for the overall care of the patient during this Unit admission (not Intensive Care Medicine /Anaesthetic Consultant)
	Residence prior to admission to your unit	Drop-down (6)	E.g., Home, Nursing home etc. Please see ICNARC Data Collection Manual p118
	Admitted to this unit from	Drop-down (12)	Source of admission to this Unit. OT = Operating Theatre and Recovery or RR only = Recovery Room only or Ward (when you chose this option, specify ward will be activated)
	Specify Ward	Drop-down list (copy of your local hospital ward list on InfoFlex)	Name of Ward in this Hospital from Ward list
	Days between admission to your hospital and admission to your unit	Automatically calculated	Calculated automatically by InfoFlex
	Age - At ICU Admission	Automatically calculated	Calculated automatically by InfoFlex Age of Patient on date of Admission to this Unit

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Admission	Admission currently/recently/not pregnant	Drop-down (3)	Female patients age <70 yrs. "Recently pregnant is defined as any woman who has had a miscarriage, a termination of pregnancy, a stillbirth or a live birth (baby) within 42 days of the date of admission to your unit" ICNARC Data Collection Manual p7 and NOCA manual appendix 1 & 2
	Gestation of Pregnancy (Both ICNARC and NOCA data field)	In weeks	If currently/recently pregnant, enter gestation in weeks within Record Pregnancy details tab ICNARC Data Collection Manual p75
	Currently Pregnant Details (NOCA data field)	**FAQ**	9 data items for currently pregnant to be answered if appropriate 2 data items on previous pregnancies to be answered
	Recently Pregnant Details (NOCA data field)	**FAQ**	9 data items for recently pregnant to be answered 2 data items on previous pregnancies to be answered
	ICNARC Notes	Free text box **FAQ**	The ICNARC Notes box is used to verify unusual values for ICNARC Data Coordinators (non-clinical staff) e.g., Highest Temperature Correct at 44°C, Height not available. Concise text only No identifiers (patient, nurse, doctor, unit, hospital) should be included in text data entered into this field This note is visible at the end of each panel on InfoFlex. ICNARC Data Collection Manual p147

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Further Admission	**Further Admission**		
	Type of Critical Unit (In)	Drop-down (12)	ICNARC Data Collection Manual p153
	Reason for transfer to your Unit	Drop-down (5)	ICNARC Data Collection Manual p114
	Date of original admission to ICU/HDU		ICNARC Data Collection Manual p51
	Admitted to your Unit from (other route: your hospital)	Drop-down (9)	ICNARC Data Collection Manual p10-12
	Previously In (your hospital)	Drop-down (10)	ICNARC Data Collection Manual p10
	Admitted to your Unit from (other acute hospital)	Drop-down (12)	ICNARC Data Collection Manual p10-12
	Previously In (other acute hospital	Drop-down (6)	ICNARC Data Collection Manual p10-12
	Prior to admission to your hospital	Drop-down (2)	ICNARC Data Collection Manual p109
	Date of original admission/ attendance at acute hospital		ICNARC Data Collection Manual p52
	Sector of other hospital (In)	Drop-down (4)	ICNARC Data Collection Manual p127
	Repatriated to your Unit from other acute hospital	Tick Box	ICNARC Data Collection Manual p116
	Last in hospital set of observations recorded within 24hrs prior to referral to critical care expertise	Tick Box	Availability of Tick Box depending on admitted to your Unit from (Common routes) ICNARC Data Collection Manual p82
	Date and Time set of observations taken		Date and Time set of observations taken is the documented date of the last recorded observation prior to referral for critical care expertise ICNARC Data Collection Manual p83
	Temperature		ICNARC Data Collection Manual p83
	Systolic BP		ICNARC Data Collection Manual p83
	Heart rate		ICNARC Data Collection Manual p83

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Further Admission	Respiratory rate		ICNARC Data Collection Manual p83
	On respiratory support	Drop-down (5)	ICNARC Data Collection Manual p83
	ACVPU Scale	Drop-down (5)	ICNARC Data Collection Manual p84
	INEWS Auto calculated		Auto calculated from Last in hospital set of observations recorded within 24hrs prior to referral to critical care expertise Only Adult INEWS is supported by the INICUA definition. Do not record IMEWS and PEWS in this field choose NEWS missing where only IMEWS and PEWS are available? https://www.hse.ie/eng/about/who/cspd/ncps/deteriorating-patient-improvement-programme/early-warning-systems/
	INEWS not auto calculated	**FAQs**	If the INEWS score is not auto calculated the ICU Audit Coordinator can document the INEWS manually from data documented in the patient's chart
	Height		Measured in cm. if height is unobtainable, use estimated height and record Yes in height estimated ICNARC Data Collection Manual p20
	Is the height estimated	Tick box if estimated	ICNARC Data Collection Manual p20
	Weight		Mandatory for calculating SOFA score. Measured in kg. ICNARC Data Collection Manual p20
	Is the weight estimated	Tick box if estimated	if weight is unobtainable, use estimated weight and record Yes in Weight estimated ICNARC Data Collection Manual p20

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Medical History	Medical History		
	Evidence available to assess past medical history	Drop-down (2)	Written evidence in the patient notes ICNARC Data Collection Manual p72
	General		
	Diabetes Mellitus	Drop-down (3)	ICNARC Data Collection Manual p66
	HIV/AIDS	Drop-down (3)	ICNARC Data Collection Manual p81
	Congenital immunohumoral or cellular immune deficiency state	Drop-down (2)	ICNARC Data Collection Manual p43
	Connective Tissue Disease	Drop-down (2)	ICNARC Data Collection Manual p44
	Chronic Alcohol Dependence	Drop-down (2)	ICNARC Data Collection Manual p27
	Chronic Drug Dependence	Drop-down (2)	ICNARC Data Collection Manual p30
	Previous Transplant	Drop-down (2)	ICNARC Data Collection Manual p106
	Organ related		
	Chronic Respiratory Disease	Drop-down (5)	ICNARC Data Collection Manual p32
	Chronic Cardiovascular disease	Drop-down (5)	ICNARC Data Collection Manual p28
	Chronic Kidney Disease	Drop-down (3)	ICNARC Data Collection Manual p31
	Portal hypertension	Drop-down (3)	ICNARC Data Collection Manual p105
	Cirrhosis	Drop-down (2)	ICNARC Data Collection Manual p34 Admission has cirrhosis, diagnosed by biopsy, hepatic ultrasound scanning, hepatic CT scanning or hepatic MRI

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Medical History	Hepatic encephalopathy	Drop-down (2)	ICNARC Data Collection Manual p80
	Cerebral Vascular Disease or Stroke	Drop-down (3)	ICNARC Data Collection Manual p25
	Dementia	Drop-down (2)	ICNARC Data Collection Manual p64
	Therapies		
	Daily Steroid treatment	Drop-down (4)	ICNARC Data Collection Manual p48
	Chemotherapy	Drop-down (2)	ICNARC Data Collection Manual p26
	Radiotherapy	Drop-down (2)	ICNARC Data Collection Manual p112
	Tumour\ Malignancy		
	Solid Tumour	Drop-down (3)	ICNARC Data Collection Manual p140
	Lymphoma	Drop-down (2)	ICNARC Data Collection Manual p94
	Myelogenous/lymphocytic leukaemia or multiple myeloma	Drop-down (2)	ICNARC Data Collection Manual p96
	Frailty prior to Admission to Acute Hospital		
	Level of Frailty	Drop-down (4)	ICNARC Data Collection Manual p37
	Clinical Frailty Score	Drop-down (9)	ICNARC Data Collection Manual p37-39

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Diagnosis	Diagnosis		
	Cardiopulmonary resuscitation (CPR) within 24 hours prior to admission to your unit	Drop-down (3)	ICNARC Data Collection Manual p21
	Planned Admission	Drop-down (2) **FAQs**	ICNARC Data Collection Manual p103
	Treatment Goals at Admission to Your Unit	Drop-down (5) **FAQs**	ICNARC Data Collection Manual p150
	Limitation on Treatments at Admission		
	Any Limitations on treatment at Admission to your Unit	Tick Box	ICNARC Data Collection Manual p15
	Not for Invasive Ventilation?	Tick Box	ICNARC Data Collection Manual p15
	Not for renal Replacement?	Tick Box	ICNARC Data Collection Manual p15
	Not for CPR?	Tick Box	ICNARC Data Collection Manual p15
	Any other Limitations?	Tick Box	ICNARC Data Collection Manual p15
	In Hospital Surgery/ Procedure conducted (within 24hrs prior to admission to your Unit)	Tick Box	ICNARC Data Collection Manual p85
	Type of surgery/ procedure (within 24hrs prior to admission to your Unit).	Drop-down (4)	ICNARC Data Collection Manual p155

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Diagnosis	Classification of surgery /procedure	Drop-down (2)	ICNARC Data Collection Manual p35
	Condition for which surgery/procedure performed (within 24 hours prior to admission to your unit)		ICNARC Coding method (ICM) ICNARC Data Collection Manual p41
	Condition for which surgery/procedure performed- incomplete code textbox	Free text field	ICNARC Data Collection Manual p41
	Is Condition for which surgery/procedure performed the primary reason for admission to your Unit	Tick Box	ICNARC Data Collection Manual p41
	Primary reason for admission to your unit		ICNARC Coding method (ICM) ICNARC Data Collection Manual p107
	Primary reason for admission to your unit- incomplete code text	Free text field	ICNARC Data Collection Manual p107
	Secondary reason for admission to your unit		ICNARC Coding method (ICM). ICNARC Data Collection Manual p126
	Secondary reason for admission to your unit- incomplete code text	Free text box	ICNARC Data Collection Manual p126
	No Secondary reason for admission to your unit	Tick Box	ICNARC Data Collection Manual p126
	Surgery/ Procedure conducted (within 24hrs after admission to your Unit)	Tick Box	ICNARC Coding method (ICM) ICNARC Data Collection Manual p145
	Type of Surgery/ Procedure (within 24hrs after admission to your Unit)	Drop-down (4)	ICNARC Data Collection Manual p155
	Classification of Surgery/procedure	Drop-down (2)	ICNARC Data Collection Manual p35
	Condition for which Surgery/ Procedure performed (24hrs after admission to your Unit)		ICNARC Coding method (ICM) ICNARC Data Collection Manual p42

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Diagnosis	Condition for which Surgery/ Procedure performed- incomplete code text	Free text box	ICNARC Data Collection Manual p42
	Ultimate primary reason for admission to your unit		ICNARC Coding method (ICM). ICNARC Data Collection Manual p156
	Ultimate primary reason for admission to your unit- incomplete code text box	Free text box	ICNARC Data Collection Manual p156
	Burns Injury	Tick box for presence	Admission sustained burns injury prior to admission
	Burns Injury - % Body surface area Burned	Text box %	Burned surface area is defined as the sum (%) of the extent of second-and third-degree burns (first-degree burns are not taken into account)

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Physiological Details	**Physiological Details** Part of the validation process for the ICU Audit Coordinator is to ensure that any artefactual values are excluded e.g. reading from a dampened arterial line, disconnected temperature probe, RR while coughing.		
	Evidence available to abstract physiological data	Choose Yes or No as appropriate	If "No" is selected, InfoFlex will not permit you to enter any physiological data. If no physiological data are entered, you will not be able to calculate the highest level of care received in the first 24 hours on the Organ Support Panel. If "Yes" is selected you must enter at least 1xTemperature, 1x BP, 1x HR and 1x RR and mark all other items 'Missing' to allow calculation of the highest level of care received in the first 24 hours on the Organ Support Panel. However accurate calculation of illness severity scores and risk prediction requires the full set of physiological data ICNARC Data Collection Manual p71
	Central temperature (C): Lowest	If yes is selected above, one central or non-central temperature is mandatory	ICNARC Data Collection Manual p146
	Central temperature (C): Highest		ICNARC Data Collection Manual p146
	Non-central temperature (C): Lowest		ICNARC Data Collection Manual p146
	Non-central temperature (C): Highest		ICNARC Data Collection Manual p146
	Systolic (mmHg) Lowest	If yes selected above, one BP is mandatory	ICNARC Data Collection Manual p19
	Paired Diastolic (mmHg) Lowest		ICNARC Data Collection Manual p19
	Systolic (mmHg) Highest		ICNARC Data Collection Manual p19
	Paired Diastolic (mmHg) Highest		ICNARC Data Collection Manual p19

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Physiological Details	Heart rate (beats/min) Lowest	If yes selected above, one HR is mandatory	ICNARC Data Collection Manual p79
	Heart rate (beats/min) Highest		ICNARC Data Collection Manual p79
	Non-ventilated respiratory rate (Breaths min -1) (Lowest)	If yes selected above, one ventilated or non-ventilated RR is mandatory	If no breaths are provided by a ventilator, document the respiratory rate (spontaneous) as the Non-Ventilated RR If breathing with CPAP with no additional pressure support, document the respiratory rate (spontaneous) as the Non-Ventilated RR ICNARC Data Collection Manual p121
	Non-ventilated respiratory rate (Breaths min -1) (Highest)		ICNARC Data Collection Manual p121
	Ventilated respiratory rate (Breaths min -1) (Lowest)	**FAQ**	If some or all of the breaths are provided by a ventilator, document the respiratory rate (ventilated plus spontaneous) as the Ventilated RR. ICNARC Data Collection Manual p121
	Ventilated respiratory rate (Breaths min -1) (Highest)		ICNARC Data Collection Manual p121
	Total urine output for scored period (ml)		Total urine output for the first 24 hours in the Unit (ml). ICNARC Data Collection Manual p161
	Urine output missing	Tick box if missing	ICNARC Data Collection Manual p161
	Acute Kidney Injury	Mandatory field. Click once for Yes and a ✓ will appear or twice for No and an X will appear.	APACHE and SOFA Scores require this field to be completed, to calculate correctly. Definitions adapted from **RIFLE criteria and KDIGO -** defined either by 1. Serum Creatinine (Se Cr) or by 2. Urine Output. See Appendix 4: AKI Definition NOCA INICUA data definition manual p63-64 If baseline Se Cr is not known, assume upper limit of the normal range (as per local lab range) as baseline ***Creatinine criteria;*** Increase in Se Cr by more than 26umol/L (within a 48hr period) OR Increase in Se Cr by more than 1.5 times baseline value (within a 7-day period) ***Urine output criteria;*** Urine output < 0.5ml/kg/hr for > 6 hours (e.g., <210mls for a patient with IBW = 70kg) **N.B.** Patient cannot have an Acute Kidney Injury if already on long-term dialysis. Please tick X for No Acute Kidney Injury if patient on long-term dialysis.

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Physiological Details	**Arterial Blood Gas (ABG)**		
	Arterial blood gases missing	Drop down Yes/No	Please see ICNARC Data Collection Manual p102
	ABG- Do not record venous		
	ABG with Lowest, PaO2 (in first 24 Hours)		ICNARC Data Collection Manual p102
	Associated FiO2 (Fraction) at time of ABG	FiO2 at the time the ABG with the Lowest Pa02 was taken	ICNARC Data Collection Manual p102
	Associated PaCO2 kPa	PaCO2 from the same ABG as the Lowest Pa02	ICNARC Data Collection Manual p102
	Associated pH	pH from the same ABG as the Lowest Pa02	ICNARC Data Collection Manual p102
	Associate Intubation status (for PaO2)	Drop down Yes/No	ICNARC Data Collection Manual p102
	ABG with Lowest pH		
	ABG with Lowest pH (in first 24 Hours)	**FAQ**	ICNARC Data Collection Manual p17
	Associated PaCO2 kPa	PCO2 from the same ABG as the Lowest pH	ICNARC Data Collection Manual p17
	Blood Tests (lowest and highest during the first 24 hours in your unit) How are data items with decimal points entered onto the Physiological Details panel? See **FAQ** document **N.B.** Where only one value exists, populate lowest data field. If no lowest value exists, select 'Missing'.		
	Serum bicarbonate (mmol l-1) (Lowest)		ICNARC Data Collection Manual p132
	Serum bicarbonate (mmol l-1) (Highest)		ICNARC Data Collection Manual p132
	Serum bicarbonate (mmol l-1) Missing		ICNARC Data Collection Manual p132
	Serum sodium (mmol l-1) (Lowest)		ICNARC Data Collection Manual p136

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Physiological Details	Serum sodium (mmol l-1) (Highest)		ICNARC Data Collection Manual p136
	Serum sodium (mmol l-1) Missing		ICNARC Data Collection Manual p136
	Serum potassium (mmol l-1) (Lowest)		ICNARC Data Collection Manual p135
	Serum potassium (mmol l-1) (Highest)		ICNARC Data Collection Manual p135
	Serum potassium (mmol l-1) Missing		ICNARC Data Collection Manual p135
	Serum glucose (mmol l-1) (Lowest)		ICNARC Data Collection Manual p134
	Serum glucose (mmol l-1) (Highest)		ICNARC Data Collection Manual p134
	Serum glucose (mmol l-1) Missing		ICNARC Data Collection Manual p134
	Blood lactate (mmol l-1) (Highest)	Must be arterial, do not record venous lactate	ICNARC Data Collection Manual p18
	Blood lactate (mmol l-1) Missing		ICNARC Data Collection Manual p18
	Serum urea (mmol l-1) (Highest)		ICNARC Data Collection Manual p137
	Serum urea (mmol l-1) Missing		ICNARC Data Collection Manual p137
	Serum creatinine (µmol l-1) (Lowest)		ICNARC Data Collection Manual p133
	Serum creatinine (µmol l-1) (Highest)		ICNARC Data Collection Manual p133
	Serum creatinine (µmol l-1) Missing		ICNARC Data Collection Manual p133
	Total Serum Bilirubin (µmol l-1) Highest		ICNARC Data Collection Manual p148
	Total Serum Bilirubin (µmol l-1) Missing		ICNARC Data Collection Manual p148
	Serum Albumin (g l-1) (Highest)		ICNARC Data Collection Manual p131
	Serum Albumin (g l-1) Missing		ICNARC Data Collection Manual p131

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Physiological Details	Haemoglobin (g dl-1) (Lowest)		ICNARC Data Collection Manual p78
	Haemoglobin (g dl-1) (Highest)		ICNARC Data Collection Manual p78
	Haemoglobin (g dl-1) Missing		ICNARC Data Collection Manual p78
	Platelet count (10^9/L) (Lowest)		ICNARC Data Collection Manual p104
	Platelet count (10^9/L) Missing		ICNARC Data Collection Manual p104
	White blood cell count (10^9/L) (Lowest)		ICNARC Data Collection Manual p164
	White blood cell count (10^9/L) (Highest)		ICNARC Data Collection Manual p164
	White blood cell count (10^9/L) (Missing)		ICNARC Data Collection Manual p164
	Lymphocyte count (Lowest)		ICNARC Data Collection Manual p93
	Lymphocyte count (Highest)		ICNARC Data Collection Manual p93
	Lymphocyte count (Missing)		ICNARC Data Collection Manual p93
	Absolute neutrophil count:(10^9/L) (Lowest)		Must be taken from the same WBC as above ICNARC Data Collection Manual p6
	Absolute neutrophil count:(10^9/L) (Highest)		ICNARC Data Collection Manual p6
	Absolute neutrophil count: Missing		ICNARC Data Collection Manual p6
	C-Reactive Protein (mg l-1) (Highest)		ICNARC Data Collection Manual p47
	C-Reactive Protein: Missing		ICNARC Data Collection Manual p47
	Procalcitonin (ug/l-1) (Highest)		ICNARC Data Collection Manual p110
	Procalcitonin: Missing		ICNARC Data Collection Manual p110

	Biochemistry during full ICU stay- NOCA data items		
	Data Item	**Calculated or automated number / value/ FAQ**	**Definition / Instruction**
	Lactate > 5 mmol/l at any time during ICU stay	Tick box for presence. Do not record venous	Select this data field if a patient has a lactate level greater than 5 mmol/l at any time during this stay in your unit Leave blank if not applicable
	Blood sugar < 4mmol/dl; no of episodes during ICU stay	No of episodes	Complete this data field with the total number of episodes of a blood sugar less than 4 mmol/dl during this full ICU stay
	Blood sugar >10 mmol/dl; no of episodes during ICU stay	No of episodes	Complete this data field with the total number of episodes of a blood sugar greater than 10 mmol/dl during this full ICU stay

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Scoring	**Scoring**		
	Pupil Reactivity		
	Pupil reactivity (right eye)	Drop-down (3)	ICNARC Date Collection Manual p111
	Pupil reactivity (left eye)	Drop-down (3)	ICNARC Date Collection Manual p111
	Pupil reactivity missing:	Click once for Yes (☐ will appear)	ICNARC Date Collection Manual p111
	Sedation		
	Sedated or paralysed and sedated for whole of first 24 hours in your unit	Drop-down (4)	ICNARC Data Collection Manual p129
	Neurological status	Drop-down (2)	Neurological assessment is only valid when there has been a period free from the effects of sedative and/or paralysing or neuromuscular blocking agents are valid ICNARC Data Collection Manual p97
	Lowest Glasgow COMA Score		
	Lowest total GCS	Automatically calculated	Calculated automatically by InfoFlex ICNARC Data Collection Manual p76 Further Information in Appendix 2: See ICNARC Data Collection Manual p166

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Scoring	Associated eye component	Text Box	Neurological assessment is only valid when there has been a period free from the effects of sedative and/or paralysing or neuromuscular blocking agents are valid ICNARC Data Collection Manual p76
	Associated motor component	Text Box	Neurological assessment is only valid when there has been a period free from the effects of sedative and/or paralysing or neuromuscular blocking agents are valid ICNARC Data Collection Manual p76
	Associated verbal component	Text Box	Neurological assessment is only valid when there has been a period free from the effects of sedative and/or paralysing or neuromuscular blocking agents are valid ICNARC Data Collection Manual p76
	NOCA APACHE Score		
	NOCA APACHE II Final Score	Automatically calculated	Calculated automatically by InfoFlex. The final score is calculated when all physiological details, ABG and GCS within the first 24 hours are completed
	ICNARC Score		
	ICNARC Final Score	Automatically calculated	Calculated automatically by InfoFlex. The final score is calculated when all physiological details, ABG and GCS within the first 24 hours are completed. Refer to The ICNARCH-2018 model: ICNARC Case Mix Programme
	SOFA Score		
	SOFA Final Score	Automatically calculated	Calculated automatically by InfoFlex Refer to Sepsis (Sepsis-3) during the first 24 hours following admission to the critical care unit ICNARC Case Mix Programme Updated November 2018
	Vasoactive agent(s)		
	Vasoactive agent(s) administered during first 24 hours in your unit	Drop down (Yes/No)	ICNARC Data Collection Manual p162

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Scoring	Maximum Infusion Rate in first 24 hours in ICU		
	Dopamine (ug/kg/min-1)		Highest dose in first 24 Hours. Leave blank if not administered within first 24 hours. ICNARC Data Collection Manual p162
	Dobutamine (ug/kg/min-1)		Highest dose in first 24 Hours. Leave blank if not administered within first 24 hours. ICNARC Data Collection Manual p162
	Adrenaline (ug/kg/min-1)		Highest dose in first 24 Hours. Leave blank if not administered within first 24 hours. ICNARC Data Collection Manual p162
	Noradrenaline (ug/kg/min-1)		Highest dose in first 24 Hours. Leave blank if not administered within first 24 hours. ICNARC Data Collection Manual p162
	Vasopressin (U min-1)		Highest dose in first 24 Hours. Leave blank if not administered within first 24 hours. ICNARC Data Collection Manual p162
	Phenylephrine (µg/ kg-1 /min-1)		Highest dose in first 24 Hours. Leave blank if not administered within first 24 hours. ICNARC Data Collection Manual p162
	Metaraminol(maximum infusion rate)mg hour-1		Highest dose in first 24 Hours. Leave blank if not administered within first 24 hours. ICNARC Data Collection Manual p162
	Terlipressin (maximum infusion rate)mg hour-1		Highest dose in first 24 Hours. Leave blank if not administered within first 24 hours. ICNARC Data Collection Manual p162
	Milrinone (ug/kg/min-1)		Highest dose in first 24 Hours. Leave blank if not administered within first 24 hours. ICNARC Data Collection Manual p

Commented [FT1]: Add page number when ICNARC manual updated

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Scoring	Total Bolus		
	Metaraminol (total bolus) mg		Highest dose in first 24 Hours Leave blank if not administered within first 24 hours ICNARC Data Collection Manual p162
	Terlipressin (total bolus) mg		Highest dose in first 24 Hours Leave blank if not administered within first 24 hours ICNARC Data Collection Manual p162

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
NOCA Interventions in ICU	**NOCA Interventions in ICU**		
	Cardiovascular		
	Arterial Line	Tick box for presence	Tick this data field if a patient had an arterial line in situ at any time during this stay in your unit Leave blank if not present
	Central venous catheter	Tick box for presence	Select this data field if a patient had a central venous catheter (CVC) in situ at any time during this stay in your unit. A CVC includes all types of central lines including Vascath, Portacath / Permacath, PA sheath / introducer and PICC line. A PA catheter via an introducer counts as one CVC Leave blank if not present
	CVC days	No of Days **FAQ**	The cumulative number of days each central venous catheter (CVC) was in situ during this stay in your Unit E.g., If Patient one has a Vascath and a Subclavian catheter in situ on Day 1, this counts as 2 CVC days. If Patient one then has a Vascath only on Day 2, Day 1 + Day 2 total = 3 CVC days
	Vasopressors	Tick box for presence	Select this data field if a patient received vasopressors at any time during this stay in your Unit Leave blank if not applicable
	Vasopressor days	No of days	When vasopressors data item is selected you must enter the number of calendar days that an admission received vasopressor drugs during this stay in your Unit Leave blank if not applicable
	Intra-aortic balloon pump	Tick box for presence	Select this data field if a patient had an Intra-aortic balloon pump in situ at any time during this stay in your unit Leave blank if not present
	Pulmonary artery catheter	Tick box for presence	Select this data field if a patient had a Pulmonary artery catheter in situ at any time during this stay in your Unit Leave blank if not present
	Non-Invasive Cardiac output monitor	Tick box for presence	Select this data field if a patient had a Non-Invasive Cardiac output monitor (e.g., PICCO) in situ at any time during this stay in your unit Leave blank if not present

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
NOCA Interventions in ICU	PACEMAKER	Tick box for presence **FAQ**	Select this data field if a patient had an external Pacemaker (in use or not in use) in situ at any time during this stay in your Unit If pacemaker is in use, this equates to an advanced cardiovascular support day within Daily Details Leave blank if not present
	TOE	Tick box for presence	Select this data field if a patient had a Trans-Oesophageal Echocardiograph (TOE) performed at any time during this stay in your unit Leave blank if not present
	ECMO	Tick box for presence	Select this data field if a patient underwent ECMO at any time during this stay in your unit. Leave blank if not applicable
	ECMO Hours	No of Hours	Complete the data field where a patient undergoes ECMO for any part of an hour at any time during this stay in your Unit.
	Location where ECMO commenced	Drop-down list (3)	1. ICU if patient was commenced on ECMO in your own ICU 2. Theatre if patient was commenced on ECMO in your own hospital's theatres 3. Referring Hospital if patient was commenced on ECMO in any area of another hospital
	ECMO type	Drop-down list (2)	1. VA if ECMO site is veno-arterial 2. VV if ECMO type is veno-veno
	VA configuration	Drop-down list (2)	If you selected VA as the ECMO type above, select 1. Peripheral or 2. Central as the access site
	Transfusion		
	Transfused in ICU	Tick box for presence	Select this data field if a patient was transfused with blood products at any time during this stay in your unit Leave blank if not applicable

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
NOCA Interventions in ICU	Plasma	Tick box for presence	Select this data field if a patient received a transfusion of plasma (includes Albumin) at any time during this stay in your unit. Leave blank if not applicable
	Plasma number of Units	Number	Where plasma data item is selected, please add the number of plasma units transfused that a patient receives during this stay in your unit (count 100mls 20% albumin or 500mls 5% albumin as one Unit) Leave blank if not applicable
	Platelets	Tick box for presence	Select this data field if a patient received a transfusion of platelets at any time during this stay in your unit. Leave blank if not applicable
	Platelets number of Units	Number	Where platelets data item is selected, please add the number of units of platelets (i.e., pools of platelets) transfused, that a patient receives during this stay in your unit Leave blank if not applicable
	RBC	Tick box for presence	Select this data field if a patient received a transfusion of red blood cells at any time during this stay in your unit. Leave blank if not applicable
	RBC number of Units	Number	Where RBC data item is selected, please add the number of units of RBCs transfused that a patient receives during this stay in your unit Leave blank if not applicable
	Other transfusion	Tick box for presence	Select this data field if a patient received a transfusion of any other blood product. Examples include: whole blood, Prothromplex, Cryoprecipitate, Factor IX, Factor VII, Factor VIII, Fibrinogen, Granulocytes, Leucocytes, etc. Do not include autologous transfusion (e.g., Cellsaver, blood from CPB pump, etc.) Leave blank if not applicable
	Respiratory		
	Non –Invasive Ventilation	Tick box for presence	Non-invasive ventilation is delivered without an artificial airway e.g., via face mask/hood, where all or some of the breaths or a portion of the breaths (pressure support) are delivered by a mechanical device. Select this data field if a patient had non-invasive ventilation at any time during this stay in your unit Leave blank if not applicable
	Non –Invasive Ventilation hours	No of Hours	Complete this data field with the number of hours a patient received non-invasive ventilation for any part of an hour at any time during this stay in your unit

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
NOCA Interventions in ICU	Invasive Ventilation	Tick box for presence	Invasive ventilation is delivered through an artificial airway e.g. Endotracheal Tube or Tracheostomy, where all or some of the breaths or a portion of the breaths (pressure support) are delivered by a mechanical device. Select this data field if a patient had invasive ventilation at any time during this stay in your unit Leave blank if not applicable
	Invasive Ventilation **hours**	No of Hours	Complete this data field with the number of hours a patient received invasive ventilation for any part of an hour at any time during this stay in your unit
	HFOV	Tick box for presence	High Frequency Oscillatory Ventilation (HFOV) is a form of mechanical ventilation that uses a constant mean airway pressure (MAP) with pressure variations oscillating around the MAP at very high rates Select this data field if a patient had HFOV at any time during this stay in your unit Leave blank if not applicable
	HFOV hours	No of Hours	Complete this data field with the number of hours a patient received HFOV for any part of an hour at any time during this stay in your unit
	Re-Intubated	Tick box for presence	Select this data field if a patient was re-intubated at any time during this stay in your unit. Leave blank if not applicable
	Re-Intubated no. of **Times**	No of Episodes	Complete this data field with the number of episodes a patient was re-intubated during this stay in your unit
	CPAP	Tick box for presence	Continuous positive airway pressure (CPAP) is delivery of non-mechanical positive end expiratory pressure (PEEP) from a valve Select this data field if a patient received CPAP at any time during this stay in your unit Leave blank if not applicable
	Nitric Oxide	Tick box for presence	Select this data field if a patient received Nitric Oxide at any time during this stay in your unit Leave blank if not applicable
	Chest Drain	Tick box for presence	Select this data field if a patient had a chest drain in situ at any time during this stay in your unit Leave blank if not applicable
	Bronchoscopy	Tick box for presence	Select this data field if a patient had a bronchoscopy performed at any time during this stay in your unit Leave blank if not applicable

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
	Tracheostomy performed during ICU stay	Tick box for presence	Select this data field if a patient had a tracheostomy performed at any time during this stay in your unit Leave blank if not applicable
	Tracheostomy Procedure	Drop-down (2)	1. Percutaneous where the tracheostomy is performed in ICU 2. Open where the tracheostomy was performed in theatre
	Total days with tracheostomy	No of days	The total number of days a patient has a tracheotomy in situ during this stay in your unit Leave blank if not applicable
	Total days ventilated via tracheostomy	No of days	The total number of days a patient is ventilated via tracheotomy during this stay in your unit Leave blank if not applicable
	Neurological Intervention		
	ICP Monitor	Tick box for presence	Select this data field if a patient had an intra-cerebral pressure (ICP) monitor inserted at any time during this stay in your unit Leave blank if not applicable
	ICP Monitor inserted in	Drop-down (2)	1. Theatre where the ICP Monitor was inserted in theatre 2. ICU where the ICP Monitor was inserted in your unit
	EVD	Tick box for presence	Select this data field if a patient had extra ventricular drain (EVD) in situ at any time during this stay in your unit Leave blank if not applicable
	Epidural	Tick box for presence	Select this data field if a patient had an epidural cannula in situ (in use or not) at any time during this stay in your unit. Leave blank if not applicable

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
	Gastrointestinal Tract		
	Nutrition in ICU	Tick box for presence	Select this data field if a patient received any oral, enteral or TPN (total parenteral) nutrition at any time during this stay in your Unit Leave blank if not applicable
	GI Support days	No of Days	Enter the number of days a patient receives any TPN or enteral nutrition during this stay in your unit (Excludes oral diet)
	Nutrition-Enteral	Tick box for presence	Select this data field if a patient received Nutrition-Enteral at any time during this stay in your unit. Leave blank if not applicable
	Enteral Feeding	No of days	Complete this data field with the total number of days a patient receives enteral feeding at any time during this stay in your unit Leave blank if not applicable
	Nutrition-TPN	Tick box for presence	Select this data field if a patient received TPN at any time during this stay in your Unit. Leave blank if not applicable
	TPN	No of days	Complete this data field with the total number of days a patient receives TPN at any time during this stay in your unit Leave blank if not applicable
	Nutrition-Oral	Tick box for presence	Select this data field if a patient received oral diet (excludes water) at any time during this stay in your unit Leave blank if not applicable
	Sengstaken tube	Tick box for presence	Select this data field if a patient had a Sengstaken tube in situ at any time during this stay in your unit Leave blank if not applicable

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
	Renal		
	RRT	Tick box for presence	Select this data field if a patient received renal replacement therapy (RRT) at any time during this stay in your unit RRT includes CVVH, peritoneal dialysis and haemodialysis Leave blank if not applicable
	RRT days total	No of Days	Complete this data field with the total number of days a patient received RRT at any time during this stay in your unit Leave blank if not applicable
	CRRT	Tick box for presence	Select this data field if a patient had a continuous veno-veno haemodialysis (CVVH) therapy at any time during this stay in your unit CVVH encompasses all continuous modes of dialysis e.g., CVVHDF, CVVHD, SCUF Leave blank if not applicable
	CRRT Days	No of Days	Complete this data field with the number of days a patient had CVVH therapy at any time during this stay in your unit Leave blank if not applicable
	Peritoneal Dialysis	Tick box for presence	Select this data field if a patient had peritoneal dialysis (PD) performed at any time during this stay in your unit Leave blank if not applicable
	Peritoneal Dialysis Days	No of Days	Complete this data field with the number of days a patient had peritoneal dialysis at any time during this stay in your unit Leave blank if not applicable
	Haemodialysis	Tick box for presence	Select this data field if a patient had haemodialysis performed at any time during this stay in your unit Off Unit haemodialysis is counted here Leave blank if not applicable
	Haemodialysis Days	No of Days	Complete this data field with the number of days a patient had haemodialysis at any time during this stay in your unit. Off Unit haemodialysis is counted here. Off unit haemodialysis does not equate to a renal support day within Daily Details

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
NOCA Interventions in ICU	Plasmaphoresis	Tick box for presence	Select this data field if a patient had plasmaphoresis performed at any time during this stay in your unit This is not considered renal replacement therapy ICNARC defined renal organ support day does not include plasmaphoresis. Leave blank if not applicable
	Plasmaphoresis Days	No of Days	Complete this data field with the number of days a patient had plasmaphoresis at any time during this stay in your unit
	Transfers from Unit		
	Theatre for surgery	Tick box for transfer	Select this data field if a patient was transported from your unit to Theatre for a procedure/surgery at any time during this stay in your unit Leave blank if not applicable
	Theatre for surgery	No of times	Complete this data field with the number of times a patient was transported from your unit for a procedure/surgery during this stay in your unit
	Radiology Dept	Tick box for transfer	Select this data field if a patient was transported from your unit to the Radiology Department at any time during this stay in your unit Leave blank if not applicable
	Radiology Dept No of times	No of times	Complete this data field with the number of times a patient was transported from your unit to the Radiology Department during this stay in your unit
	CT Scan	Tick box for transfer	Select this data field if a patient was transported from your unit for a CT scan/ MRI at any time during this stay in your unit Leave blank if not applicable
	CT Scan No of times	No of times	Complete this data field with the number of times a patient was transported from your unit for a CT scan / MRI during this stay in your unit
	Angiogram (Non-Cardiac)	Tick box for transfer **FAQ**	Select this data field if a patient was transported from your unit for an angiogram (non-cardiac) at any time during this stay in your unit Leave blank if not applicable
	Intervention Radiology	Tick box for transfer	Select this data field if a patient was transported from your unit to the Radiology Department for an interventional procedure (non-neurological) at any time during this stay in your unit Leave blank if not applicable.

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
NOCA Interventions in ICU	Intervention Radiology No of times	No of times	Complete this data field with the number of times a patient was transported from your unit to the Radiology Department for an interventional procedure during this stay in your unit.
	Cath Lab	Tick box for transfer	Select this data field if a patient was transported from your unit to the Cath Lab at any time during this stay in your unit. Leave blank if not applicable.
	Cath Lab No of times	No of times	Complete this data field with the number of times a patient was transported from your unit to the Cath Lab during this stay in your unit.
	Neurological Intervention procedure (Coiling/embolisation)	Tick box for transfer	Select this data field if a patient was transported from your unit for a neurological intervention procedure (coiling/embolisation) at any time during this stay in your unit. Leave blank if not applicable.

INICUA Data Set to support HIPE Coding Locally

This section is intended to support HIPE coding by noting diagnoses, which might not be identifiable easily by reading the patient notes.
N.B. This should include all diagnoses that are active during patient's ICU stay. Inclusion lists, where provided, are based on the ICD-10 codebook, which is often very imprecise. These details are not designed to provide epidemiological data and could not be relied upon for this purpose.

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Diagnoses Current During ICU Stay	**NOCA data fields: Diagnoses Current during ICU stay** Tick if documented in patient notes **as current** during the ICU stay. Leave blank if not recorded. *Inclusions listed are as provided in the 8th edition ICD-10-AM classification		
	Respiratory		
	Respiratory failure	Tick box for presence	Respiratory Failure documented in the patient notes. Documentation of hypoxia, hypercapnoea, and Type I or Type II respiratory failure would usually indicate 'Respiratory failure' Leave blank if not recorded
	Pulmonary Collapse	Tick box for presence	Atelectasis. Inclusive of lobar collapse or loss of lung volume documented in the patient notes Leave blank if not recorded
	Pneumonia	Tick box for presence	Consolidation documented in the patient notes Leave blank if not recorded
	Aspiration pneumonia	Tick box for presence	Consolidation caused by aspiration documented in patient notes Leave blank if not recorded
	Pneumothorax	Tick box for presence	Pneumothorax documented in patient notes Leave blank if not recorded
	Haemothorax	Tick box for presence	Haemothorax documented in patient notes Leave blank if not recorded
	Pleural effusion	Tick box for presence	Pleural Effusion documented in patient notes
	ARDS	Tick box for presence	Acute Respiratory Distress Syndrome documented in patient notes, inclusive of Adult Respiratory Distress Syndrome Leave blank if not recorded

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Diagnoses Current during ICU stay	Pulmonary oedema	Tick box for presence	Pulmonary Oedema documented in patient notes Leave blank if not recorded
	Tracheostomy complications	Tick box for presence	Tick if documented in patient notes during the ICU stay, inclusive of: • Tracheostomy malfunction • Haemorrhage from tracheostomy stoma • Obstruction of tracheostomy • Infection of tracheostomy stoma • Tracheo-oesophageal fistula Leave blank if not recorded
	Respiratory arrest	Tick box for presence	Respiratory Arrest documented in patient notes Leave blank if not recorded
	Gastrointestinal tract		
	GI bleed	Tick box for presence	Tick if documented in patient notes during the ICU stay Leave blank if not recorded
	Ileus; Paralytic Ileus	Tick box for presence	Tick if Ileus documented in patient notes during the ICU stay Paralysis of: • Bowel • Colon • Intestine Leave blank if not recorded
	Infectious gastro-enteritis	Tick box for presence	Tick if documented in patient notes during the ICU stay, inclusive of Rotavirus and 'winter vomiting' Leave blank if not recorded
	Acute pancreatitis	Tick box for presence	Tick if documented in patient notes during the ICU stay Leave blank if not recorded
	Liver failure	Tick box for presence	Tick if documented in patient notes during the ICU stay Leave blank if not recorded

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Diagnoses Current during ICU stay	**Cardiovascular**		
	Myocardial infarction	Tick box for presence	Tick if documented in patient notes during the ICU stay, inclusive of STEMI and non-STEMI Leave blank if not recorded
	Bundle branch block	Tick box for presence	Tick if documented in patient notes during the ICU stay Leave blank if not recorded
	Atrial fibrillation / flutter	Tick box for presence	Tick if documented in patient notes during the ICU stay Leave blank if not recorded
	Ventricular fibrillation	Tick box for presence	This field will be removed from InfoFlex, please do not use going forward
	Cardiac arrest	Tick box for presence	Tick if documented in patient notes during the ICU stay, inclusive of: Ventricular Fibrillation Asystole Pulseless Electrical Activity (PEA) Leave blank if not recorded
	Cardiac arrhythmias	Tick box for presence	Tick if documented in patient notes during the ICU stay Leave blank if not recorded
	Renal System		
	Acute renal failure	Tick box for presence	Tick if documented in patient notes during the ICU stay Definitions adapted from RIFLE criteria and KDIGO Guidelines; defined either by Serum Creatinine (Se Cr) or by Urine Output or if commenced on renal replacement therapy **A. Creatinine criteria:** Se Cr increased >3 times baseline value. If baseline Se Cr > 354 mmol/L, an increase in Se Cr > 44 mmol/L above baseline If baseline Se Cr is not known, assume upper limit of the normal range as baseline (As per local lab ranges) **B. Urine Output criteria:** Urine Output < 0.3 mL/kg/h for 24 h (e. g.< 504 ml/24 hours for a patient with body weight = 70Kg) or Anuria > 12 h **C.** Commenced on renal replacement therapy because of renal insufficiency Do not tick box for Acute Renal Failure if already on long-term dialysis Leave blank if not recorded

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Diagnoses Current during ICU stay	Dialysis	Tick box for presence	Tick if documented in patient notes during the ICU stay, inclusive of: • Haemodialysis • CVVH • Peritoneal Dialysis Do not record haemofiltration going forward Leave blank if not recorded
	Alcohol Related Admission		
	Alcohol Intoxication\Excess	Tick box for presence	Tick if documented in patient notes at admission or during the ICU stay
	Organ Damage from Alcohol	Tick box for presence	Tick if documented in patient notes at admission or during the ICU stay
	Haematology		
	Disseminated Intravascular Coagulation (DIC) or any Coagulation defect	Tick box for presence	Tick if documented in patient notes during the ICU stay. Leave blank if not recorded Inclusive of: • Increased PT • Increased PTT • Decreased platelets Leave blank if not recorded

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Diagnoses Current during ICU stay	Haemorrhage / Haematoma	Tick box for presence	Tick if documented in patient notes during the ICU stay Leave blank if not recorded
	Thrombocytopaenia	Tick box for presence	Tick if documented in patient notes during the ICU stay. Leave blank if not recorded
	Intravascular Thrombosis	Tick box for presence	Tick if documented in patient notes during the ICU stay. Leave blank if not recorded
	Skin		
	Cellulitis	Tick box for presence	Tick if documented in patient notes during the ICU stay Leave blank if not recorded
	Decubitus ulcer	Tick box for presence	Tick if documented in patient notes during the ICU stay Leave blank if not recorded
	VAC dressing	Tick box for presence	Tick if documented in patient notes during the ICU stay Leave blank if not recorded
	Wound infection	Tick box for presence	Tick if documented in patient notes during the ICU stay Leave blank if not recorded
	CNS		
	Stroke	Tick box for presence	Tick if documented in patient notes during the ICU stay inclusive of: • CVA Leave blank if not recorded
	Encephalopathy	Tick box for presence	Tick if documented in patient notes during the ICU stay inclusive of: Delirium Leave blank if not recorded

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
	Unit Discharge		
	Status at discharge from your unit	Drop-down (3)	If Alive is selected, complete all data items in Unit Discharge and Transferring Unit Details. If Dead is selected, click on Enter Death Details ICNARC Data Collection Manual p141
	Level of care received at discharge from your unit	Drop-down (4)	ICNARC Data Collection Manual p89
	Date of decision to discharge from your unit		ICNARC Data Collection Manual p60
	Time of decision to discharge from your unit		ICNARC Data Collection Manual p60
	Early discharge	Tick box Yes/No	ICNARC Data Collection Manual p60
	Date and time of decision to discharge from your unit not documented	Tick box	ICNARC Data Collection Manual p60
	Date of discharge from your unit		ICNARC Data Collection Manual p61
	Time of discharge from your unit		ICNARC Data Collection Manual p61
	Days between Admission & Discharge -Death Unit (LOS)	Automatically calculated	Calculated automatically by InfoFlex

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
	Irish National Early Warning System (INEWS) discharge.		
	Last INEWS prior to discharge from your unit		The ICU Audit Coordinator, if necessary can calculate INEWS. Observations are documented in the patient notes. Only Adult INEWS is supported by the INICUA definition Do not record IMEWS and IPEWS in this field choose INEWS missing where only IMEWS and IPEWS are available? https://www.hse.ie/eng/about/who/cspd/ncps/deteriorating-patient-improvement-programme/early-warning-systems/
	Last INEWS prior to discharge from your unit missing	Tick box for absence	
	Treatment Limitations		
	Any Limitations on Treatment in place at Discharge from your Unit \ Death?	Tick Box	ICNARC Data Collection Manual p16
	Not for invasive ventilation?	Tick Box	ICNARC Data Collection Manual p16
	Not for renal replacement?	Tick Box	ICNARC Data Collection Manual p16
	Not for CPR?	Tick Box	ICNARC Data Collection Manual p16
	Any other limitations?	Tick Box	ICNARC Data Collection Manual p16
	Treatment withdrawn	Drop-down (2)	ICNARC Data Collection Manual p152
	Date treatment first withdrawn		ICNARC Data Collection Manual p63
	Time treatment first withdrawn		ICNARC Data Collection Manual p63

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Transferring Unit Detail	**Transferring Unit Detail**		
	Discharge from your unit to	Drop down (10)	ICNARC Data Collection Manual p69
	Specify Ward (Out)		Name of ward in this hospital from hospital ward list
	Treatment goals at discharge from your unit	Drop down (3)	ICNARC Data Collection Manual p151
	Sector of Other hospital (out)	Drop-down (4)	ICNARC Data Collection Manual p128
	Name of other hospital	Dictionary List	Name of hospital patient is transferred to from list on InfoFlex
	Self-discharge	Drop-down (2)	ICNARC Data Collection Manual p130
	Unit Transfer		
	Status at ultimate discharge from ICU/HDU	Drop-down (2)	ICNARC Data Collection Manual p144
	Date of ultimate discharge from an ICU/HDU		ICNARC Data Collection Manual p54
	Type of adult ICU/HDU (out)	Drop-down (11)	ICNARC Data Collection Manual p154
	Reason for transfer from your unit	Drop-down (5)	ICNARC Data Collection Manual p113

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Death details	**Enter death details** If Status at discharge from your unit is dead, the fields below will appear in a separate screen for completion		
	Status at discharge from your unit	Drop-down (3)	If Alive is selected, complete all data items in Unit Discharge and Transferring Unit Details If Dead is selected, click on Enter Death Details ICNARC Data Collection Manual p142
	Date of death		ICNARC Data Collection Manual p58
	Time of Death		ICNARC Data Collection Manual p58

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Organ Donation	**Organ Donation**		
	Did patient fulfil indications for brain stem testing?	Tick Box (2)	A patient who meets all of the following criteria: invasive ventilation, Glasgow Coma Scale 3 not explained by sedation, no respiratory effort, fixed pupils, no cough, or gag reflex
	Was brainstem testing undertaken?	Tick Box (2)	Specifies whether admission brainstem testing undertaken results of brainstem death test(s) must be documented brainstem death test(s) must have been conducted according to the 2010 Intensive Care Society of Ireland (ICSI) Guidelines (2010) and 1988 Royal College of Surgeons in Ireland (RCSI) working party document https://www.intensivecare.ie/wp-content/uploads/2020/09/Brain-Death-Guidelines-September-2020.pdf
	Reason for not undertaking brainstem tests	Drop-down (4)	▪ Pre-conditions for brainstem testing not fulfilled (pre-conditions for brainstem testing are: invasive ventilation, Glasgow Coma Scale 3 not explained by sedation, no respiratory effort, fixed pupils, no cough, or gag reflex) ▪ Family withheld assent for organ donation: assent for solid organ or tissue donation was not given by the admission's next of kin ▪ Personnel for brainstem testing not available: Two sets of tests should be undertaken by different doctors; one a consultant, the other a doctor fully registered for at least five years and engaged in acute patient care in hospital. If organ donation is being considered, the doctors certifying brain death should not be involved in any proposed transplant procedure. ▪ Other specifies another reason, not listed, as to why brainstem testing was not undertaken https://www.intensivecare.ie/wp-content/uploads/2020/09/Brain-Death-Guidelines-September-2020.pdf
	Solid organ or tissue donor	Drop-down (4)	In cases of no organ donation or tissue donor only, please ensure you complete the entire Organ Donation data set Please see ICNARC Data Collection Manual p139
	Death secondary to neurological condition	Tick Box (2)	Specifies whether the admission died from an adverse intracranial pathology

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Organ Donation	Was the patient ventilated up to time of withdrawal of life-sustaining therapies?	Tick Box (2) **FAQ**	Specifies whether the patient was mechanically ventilated or not up to time of withdrawal of life-sustaining therapies
	Died while temporarily outside your unit?	Tick Box (2)	ICNARC Data Collection Manual p55
	Date body removed from your unit		ICNARC Data Collection Manual p55
	Time body removed from your unit		ICNARC Data Collection Manual p55
	Why not an organ donor?		
	Referred to organ donation personnel for solid organ donation	Drop-down (2)	A referral is any communication about a potential or definite solid organ or tissue donor that is recorded in the case notes. Include telephone calls. A potential or definite solid organ or tissue donor is defined as an admission (either after brainstem or cardiac death) from whom one or more solid organs (heart, kidney(s), liver, lungs(s), pancreas, small bowel) are/may be removed for the purposes of transplantation, or from whom tissue (heart valves, skin, cornea, bone, dura and organs/tissue for research) are/may be removed
	Assent for solid organ or tissue donation	Drop-down (3)	Specifies whether assent for solid organ or tissue donation was obtained from the admission's next of kin • expression of assent must be formally documented within the patient record • Yes, is defined as assent given and the documentation of assent to solid organ or tissue donation • No, is defined as assent refused and the documentation of refusal to solid organ or tissue donation • a potential or definite solid organ or tissue donor is defined as an admission (either after brainstem or cardiac death) from whom one or more solid organs (heart, kidney(s), liver, lungs(s), pancreas, small bowel) are/may be removed for the purposes of transplantation, or from whom tissue (heart valves, skin, cornea, bone, dura and organs/tissue for research) are/may be removed

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Organ Donation	Why not an organ donor	Drop-down (11)	Specifies why admission was not an organ donor ▪ Neoplastic disease is defined as diagnosis of neoplastic disease e.g., by tumor markers, tissue biopsy etc. ▪ Positive virology is defined as tested positive following virology investigation e.g., viral culture ▪ Organs deemed unsuitable for transplant is defined as where the transplant team considered patients organs unsuitable for transplantation due to organ dysfunction ▪ Outside age criteria is defined as where transplant team considered organs unsuitable for transplantation due to patients age ▪ Organ donation not considered by clinical staff on the unit ▪ Patient Died before donation is defined as where organ donation planned but admission died before donation could take place ▪ Patient not ventilated up to time of death is defined as the absence of Mechanical ventilation prior to and up to time of death ▪ No DCD programme in place is defined as the hospital not having a programme for DCD ▪ Time for asystole too prolonged for DCD is defined as where, after withdrawal of treatment, time until development of asystole was greater than time allowed in hospital DCD protocol ▪ Coroner refused is defined as where the Coroner refused permission for organ donation (in cases where the Coroner's permission was required) ▪ Other specifies another reason, not listed, as to why admission was not an organ donor

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
ICNARC Infections	ICNARC Infection		
	MRSA Present	Drop-down (4)	ICNARC Data Collection Manual p95
	VRE Present	Drop-down (4)	ICNARC Data Collection Manual p162
	CRE Present	Drop-down (4)	ICNARC Data Collection Manual p46
	Clostridium difficile present:	Drop-down (4)	ICNARC Data Collection Manual p40
	Unit acquired Infection(s) for admissions in your Unit for > 48hrs		
	Unit acquired infection	Drop-down (4)	ICNARC Data Collection Manual p158
	Origin of first Unit acquired bloodstream infection	Drop-down (10)	ICNARC Data Collection Manual p100
	Origin of first non-blood stream Unit acquired infection	Drop-down (10)	ICNARC Data Collection Manual p101

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
NOCA Infections in Blood	**NOCA Infections in Blood** This panel will allow entry of 5 episodes of UABSI diagnosed by the MDT Same data items required for each episode of infection according to the UABSI surveillance protocol for Ireland (available as a Weblink at: UABSI Surveillance Protocol for Ireland - Health Protection Surveillance Centre (hpsc.ie)		
	Multi-Disciplinary Team (MDT) confirmed unit-acquired blood stream infection	Where unit acquired blood stream infection is confirmed by MDT, click once for Yes and a ✓ will appear. Where not confirmed, click twice for No and an X will appear	Multi-Disciplinary Team (MDT) will include the relevant local healthcare professionals, who will confirm whether the admission had a unit acquired blood stream infection or not. **a bloodstream infection is defined as either** • at least one positive blood culture for a recognised pathogen; or • Two positive blood cultures for a common skin contaminant (from two separate blood samples taken within 48 hours of each other) and at least one of the following signs or symptoms: fever (>38°C), chills or hypotension. **a blood stream infection is defined as unit acquired** • where the blood sample(s) for microbiological culture was taken after 48 hours following admission to your unit and while still on your unit • micro-organism must have been identified in a blood sample taken not earlier than 48 hours after admission to your unit • a unit-acquired blood stream infection must be confirmed by the MDT • micro-organisms grown from line tip cultures do not represent unit-acquired blood stream infections • it is recognised that this will underestimate the true rate of unit-acquired infections present in blood i.e., those identified in any blood sample taken for microbiological culture within 48 hours post- discharge from your unit The INICUA definition for UABSI is > than 48 hours in the unit. This may conflict with UABSI Surveillance Protocol for Ireland UABSI Surveillance Protocol for Ireland - Health Protection Surveillance Centre (hpsc.ie): 'BSI are attributed as unit-acquired where the date of the positive blood culture is three days onwards following the patient date of admission to the unit'. Please use the UABSI is > than 48 hours in the unit for INICUA data entry

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
NOCA Infections in Blood	Origin of confirmed UABSI (As per HELICS criteria)	Drop-down (10)	Origin is defined as the first portal of entry into the body by the main organism causing the first UABSI, as determined by the MDT **(C)** specifies whether Central vascular catheter was the first portal of entry by the main organism causing the first UABSI **(P)** specifies whether Peripheral vascular catheter was the first portal of entry by the main organism causing the first UABSI **(L)** specifies whether Pulmonary (lungs/airway) was the first portal of entry by the main organism causing the first UABSI **(R)** specifies whether Urinary catheter was the first portal of entry by the main organism causing the first UABSI **(U)** specifies whether Urinary tract was the first portal of entry by the main organism causing the first UABSI **(D)** specifies whether Digestive tract was the first portal of entry by the main organism causing the first UABSI **(S)** specifies whether Surgical site was the first portal of entry by the main organism causing the first UABSI **(T)** specifies whether skin and soft Tissue (not surgical site) was the first portal of entry by the main organism causing the first UABSI **(O)** Other identifiable origin specifies whether another origin, not listed, was the first portal of entry by the main organism causing the first UABSI (e.g., musculoskeletal, central nervous system, cardiovascular etc.) **(N)** Unknown origin specifies that the MDT could not identify the origin of first MDT confirmed UABS. Where more than one potential origin of first UABSI is identified, the MDT will decide which origin is to be recorded

InfoFlex Panel	Data Item	Calculated or Automated number / value/ FAQ	Definition / Instruction
NOCA Infections in Blood	Origin of UABSI missing	If origin UABSI is missing, tick box to confirm	If no origin of first MDT confirmed UABSI is documented, then record origin of first MDT confirmed UABSI missing
	Organism Identified	Where organism is identified by MDT, click once for Yes and a ✓ will appear. Where not confirmed, click twice for No and an X will appear.	
	Organism causing confirmed UABSI	Dictionary List of micro-organisms A-Z	Where microorganisms causing UABSI are indicated by * or #, antibiotic resistance is relevant for this microorganism. The microorganisms with antibiotic susceptibility status are: 1. Staphylococcus aureus 2. Enterococcus 3. Enterobacteriaceae 4. Acinetobacter baumannii 5. Pseudomonas aeruginosa
	Antimicrobial resistance to confirmed UABSI #	Drop-down (4)	If the microorganism chosen above has antimicrobial resistance indicated by * or #, select appropriate number from list. 0 = Susceptible 1 = Resistant 2 = Carbapenem Resistant Enterobacteriaceae 9 = Antimicrobial sensitivity unknown
	Key antimicrobial data #	Free-text field	For key antimicrobial data not outlined above

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
NOCA Ventilator Associated Pneumonia	**NOCA Ventilator Associated Pneumonia (VAP)** VAP should be diagnosed by the MDT according to the European Centre for Disease Prevention & Control (ECDC) HAI-ICU protocol v1.01 (2010) available as a web link at: http://www.ecdc.europa.eu/en/activities/surveillance/HAI/about_HAI-Net/Pages/ICU.aspx This panel will allow you to enter 5 episodes of VAP.		
	Ventilator Associated Pneumonia (VAP) discussed and confirmed at MDT meeting	Where VAP is confirmed by MDT, click once for Yes and a ✓ will appear. Where not confirmed, click twice for No and an X will appear.	If your unit has an MDT meeting in place to review VAP, confirm presence or absence of VAP Leave blank if not applicable
	Organism causing confirmed VAP identified	Tick box for presence	Leave blank if not recorded
	Organism causing confirmed VAP (as per HELICS criteria)	Dictionary List of micro-organisms A-Z	Where microorganisms causing VAP are indicated by * or #, antibiotic resistance is relevant for this microorganism. The microorganisms with antibiotic susceptibility status are: 6. Staphylococcus aureus 7. Enterococcus 8. Enterobacteriaceae 9. Acinetobacter baumannii 10. Pseudomonas aeruginosa
	Antimicrobial Resistance to confirmed VAP	Drop-down (4)	If the microorganism chosen above has antimicrobial resistance indicated by * or #, select appropriate number from list 0 = Susceptible 1 = Resistant 2 = Carbapenem Resistant Enterobacteriaceae 9 = Antimicrobial sensitivity unknown
	Key Antimicrobial Data #	Free-text field	For key antimicrobial data not outlined above

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Organ Support	**Organ support, Level of care**		
	Organ Support	The Organ Support Panel will auto populate from the Daily Details entered.	Organ Supported are derived from the Daily details within InfoFlex.
	Highest level of care received in first 24 hours in your unit	Automatically calculated	Calculated automatically by InfoFlex from the date of admission to your unit. Minimal physiological data must be entered (1 Temperature, 1 BP, 1 HR and 1 RR and mark all other items 'Missing') to allow calculation of the highest level of care received in the first 24 hours on the Organ Support Panel If no physiological data are entered InfoFlex will not be able to calculate the highest level of care received in the first 24 hours on the Organ Support Panel
	Date and time of last summary	Automatically calculated	Calculated automatically by InfoFlex from Daily Details entered
	Calender days of organ support while in your unit		
	Respiratory support days: basic	Automatically calculated	Organ Support is derived from the Daily details panel as defined below
	Respiratory support days: advanced	Automatically calculated	Organ Support is derived from the Daily details panel as defined below
	Cardiovascular support days: basic	Automatically calculated	Organ Support is derived from the Daily details panel as defined below
	Cardiovascular support days: advanced	Automatically calculated	Organ Support is derived from the Daily details panel as defined below
	Renal support days	Automatically calculated	Organ Support is derived from the Daily details panel as defined below
	Neurological support days	Automatically calculated	Organ Support is derived from the Daily details panel as defined below
	Gastrointestinal support days	Automatically calculated	Organ Support is derived from the Daily details panel as defined below
	Dermatological support days	Automatically calculated	Organ Support is derived from the Daily details panel as defined below
	Liver Support Days	Automatically calculated	Organ Support is derived from the Daily details panel as defined below

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
	Calender of Level of care while in your unit		
	Level 3	Automatically calculated	Level of care is derived from the Daily details panel as defined below
	Level 2	Automatically calculated	Level of care is derived from the Daily details panel as defined below
	Level 1	Automatically calculated	Level of care is derived from the Daily details panel as defined below
	Level 0	Automatically calculated	Level of care is derived from the Daily details panel as defined below
	ICNARC Interventions		
	Respiratory		
	V-V ECMO at any time during unit stay	Automatically calculated	V-V ECMO is derived from the Daily details panel as defined below
	V-A ECMO at any time during unit stay	Automatically calculated	V-A ECMO is derived from the Daily details panel as defined below
	ECCO2 Removal at any time during unit stay	Automatically calculated	ECCO2 Removal is derived from the Daily details panel as defined below
	Invasive Ventilatory support at any time during ICU stay	Automatically calculated	Invasive Ventilatory support is derived from the Daily details panel as defined below

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
ICNARC Interventions	Non-Invasive Ventilatory support at any time during ICU stay	Automatically calculated	Non-Invasive Ventilatory support is derived from the Daily details panel as defined below
	Prone position at any time during ICU Stay	Automatically calculated	Prone position is derived from the Daily details panel as defined below
	Intubation		
	Translaryngeal Intubation at any time during unit stay	Automatically calculated	Translaryngeal Intubation is derived from the Daily details panel as defined below
	Tracheostomy at any time during unit stay	Automatically calculated	Tracheostomy is derived from the Daily details panel as defined below
	Cardiovascular.		
	Central Venous catheter days	Automatically calculated	Central Venous catheter days is derived from the Daily details panel as defined below
	Genito-urinary		
	Urinary catheter days	Automatically calculated	Urinary catheter days is derived from the Daily details panel as defined below
	Gastrointestinal		
	Parenteral Feeding at any time during unit stay	Automatically calculated	Parenteral Feeding is derived from the Daily details panel as defined below
	Enteral tube feeding at any time during unit stay	Automatically calculated	Enteral tube feeding is derived from the Daily details panel as defined below

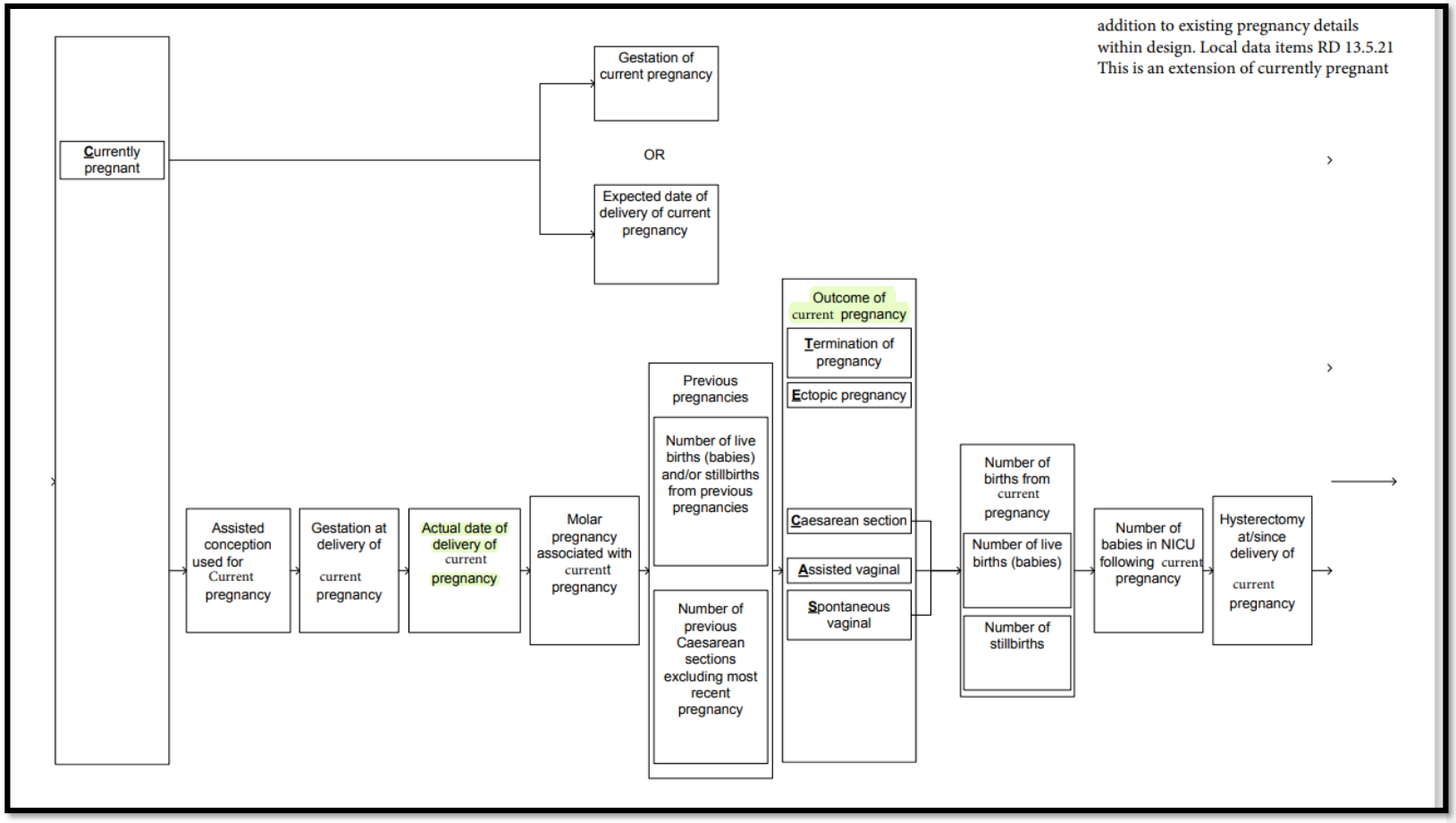
InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
	Daily Details **Create one daily detail per each day on Unit. Record a value for each data item within the daily details.** **See Appendix 10 for reference to level of support and level of care**		
	Day	Automatically calculated	Calculated automatically by InfoFlex from the date of admission to your unit
	Date	Automatically calculated	Calculated automatically by InfoFlex from the date of admission to your unit
	Respiratory support	Drop down (3)	ICNARC Data Collection Manual p123 A value must be recorded for this data item
	Cardiovascular support	**FAQ** Drop down (3)	ICNARC Data Collection Manual p22 A value must be recorded for this data item
	Renal support	Click once for Yes and a ✓ will appear. Where not present, click twice for No and an X will appear.	ICNARC Data Collection Manual p115 A value must be recorded for this data item
	Neurological support	Click once for Yes and a ✓ will appear. Where not present, click twice for No and an X will appear.	ICNARC Data Collection Manual p99 A value must be recorded for this data item
	Liver support	Click once for Yes and a ✓ will appear. Where not present, click twice for No and an X will appear.	ICNARC Data Collection Manual p92 A value must be recorded for this data item
	Gastrointestinal support days	Click once for Yes and a ✓ will appear. Where not present, click twice for No and an X will appear.	ICNARC Data Collection Manual p74 A value must be recorded for this data item
	Dermatological support days	Click once for Yes and a ✓ will appear. Where not present, click twice for No and an X will appear.	ICNARC Data Collection Manual p65 A value must be recorded for this data item
	Highest Level of Care Received	Drop-down (4)	ICNARC Data Collection Manual p90 A value must be recorded for this data item

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Daily Details	**Respiratory**		
	V-V ECMO at any time during unit stay	Click once for Yes and a ✓ will appear. Where not present, click twice for No and an X will appear.	ICNARC Data Collection Manual p119 A value must be recorded for this data item You have to tick advanced respiratory support above to answer this field
	V-A ECMO at any time during unit stay	Click once for Yes and a ✓ will appear. Where not present, click twice for No and an X will appear.	ICNARC Data Collection Manual p119 A value must be recorded for this data item You have to tick advanced respiratory support above to answer this field
	ECCO2 Removal at any time during unit stay	Click once for Yes and a ✓ will appear. Where not present, click twice for No and an X will appear.	ICNARC Data Collection Manual p119 A value must be recorded for this data item You have to tick advanced respiratory support above to answer this field
	Invasive Ventilatory support at any time during ICU stay	Click once for Yes and a ✓ will appear. Where not present, click twice for No and an X will appear.	ICNARC Data Collection Manual p119 A value must be recorded for this data item You have to tick advanced respiratory support above to answer this field
	Non-Invasive Ventilatory support at any time during ICU stay	Click once for Yes and a ✓ will appear. Where not present, click twice for No and an X will appear.	ICNARC Data Collection Manual p119 A value must be recorded for this data item You have to tick advanced /basic respiratory support above to answer this field
	Prone position at any time during ICU Stay	Click once for Yes and a ✓ will appear. Where not present, click twice for No and an X will appear.	ICNARC Data Collection Manual p119 A value must be recorded for this data item
	Intubation		
	Translaryngeal Intubation at any time during unit stay	Drop down (2) Yes/No	ICNARC Data Collection Manual p87 You have to tick advanced /basic respiratory support above to answer this field
	Tracheostomy at any time during unit stay	Drop down (2) Yes/No	ICNARC Data Collection Manual p87 A value must be recorded for this data item.

InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Daily Details	**Genito-urinary**		
	Urinary catheter	Drop down (2) Yes/No	ICNARC Data Collection Manual p160 A value must be recorded for this data item
	Cardiovascular.		
	Central Venous catheter	Drop down (2) Yes/No	ICNARC Data Collection Manual p24 You have to tick advanced /basic cardiovascular support above to answer this field
	Gastrointestinal You have to tick gastrointestinal support above to answer these fields		
	Parenteral Feeding at any time during unit stay	Tick Box: Yes/No	ICNARC Data Collection Manual p73 You have to tick gastrointestinal support above to answer these fields
	Enteral tube feeding at any time during unit stay	Tick Box: Yes/No	ICNARC Data Collection Manual p73 You have to tick gastrointestinal support above to answer these fields

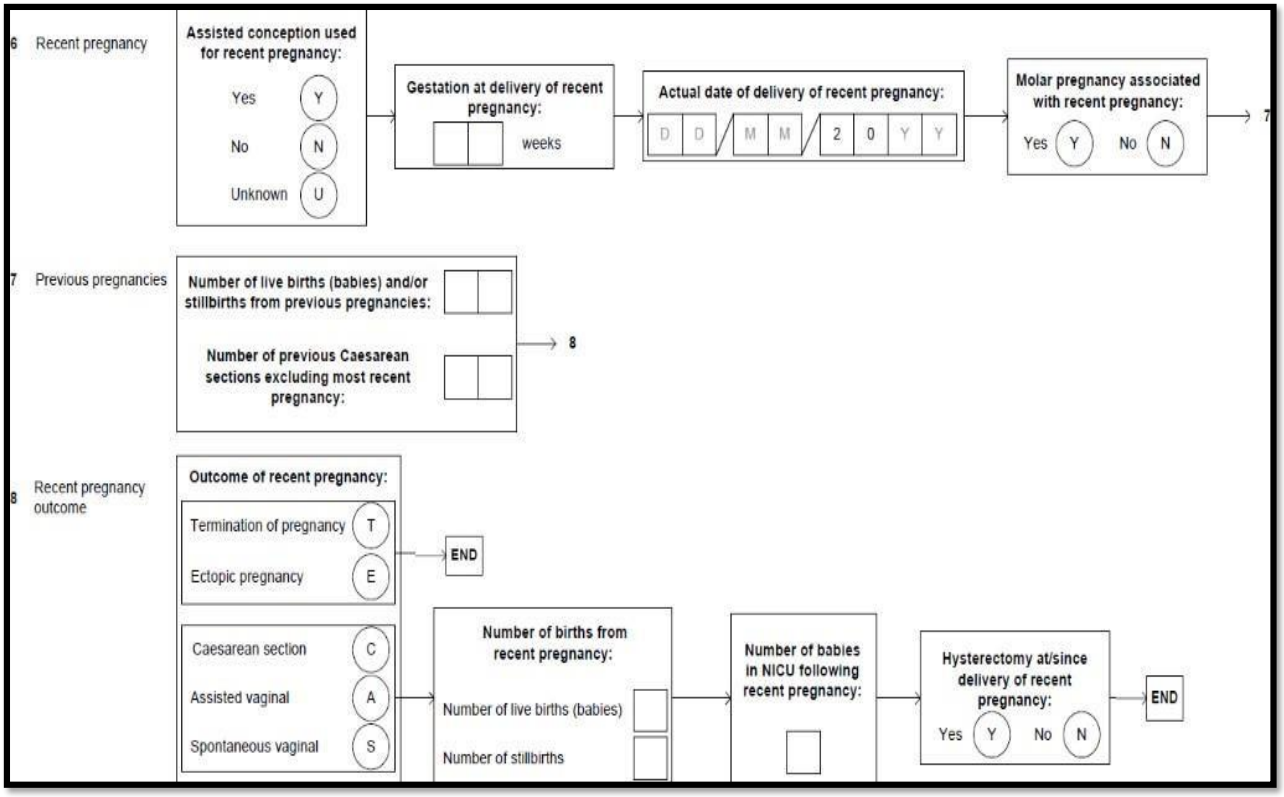
InfoFlex Panel	Data Item	Calculated or automated number / value/ FAQ	Definition / Instruction
Hospital Discharge	**Hospital Discharge**		
	Date of discharge from your unit	Automatically populated	This data field auto populates from the Unit Discharge Panel
	Time of discharge from your unit	Automatically populated	This data field auto populates from the Unit Discharge Panel
	Status at discharge from your hospital	Drop-down (2)	ICNARC Data Collection Manual p141
	Date of discharge from your hospital		ICNARC Data Collection Manual p50
	Days between admission & discharge (hospital)	No of Days Automatically calculated	Calculated automatically by InfoFlex
	Discharged from your Hospital to	Drop-down (3)	ICNARC Data Collection Manual p68
	Discharged from your Hospital for palliative care	Tick Box	ICNARC Data Collection Manual p67
	Sector of Other Hospital (out)	Drop-down (4)	ICNARC Data Collection Manual p127
	Residence post discharge from your hospital	Drop-down (5)	ICNARC Data Collection Manual p117
	Status at ultimate discharge from hospital	Drop-down (2)	ICNARC Data Collection Manual p144
	Date of ultimate discharge from acute hospital		ICNARC Data Collection Manual p53
	Left acute hospital?	Tick box to confirm	Tick this box to confirm you have completed all of the acute hospital discharge data set

APPENDIX 1; CURENTLY PREGNANT



Version 4 NOCA Dataset use for Currently Pregnant data collection

APPENDIX 2; RECENTLY PREGNANT



Version 4 NOCA Dataset use for Recently Pregnant data collection

APPENDIX 3; SEPSIS DEFINITION

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Definition: Sepsis (Sepsis-3) during the first 24 hours following admission to the critical care unit

The Case Mix Programme Database (CMPD) contains data that were collected, primarily, for case mix adjustment. Most of the admission data relate to the first 24 hours following admission to the critical care unit, with some data on medical history and reasons for admission. Thus, the CMPD can be used to identify admissions that had sepsis at admission to the unit or that developed sepsis during the first 24 hours in the unit but cannot be used to identify admissions that developed sepsis after the first 24 hours following admission to the unit.

Based on the current international consensus definitions,[1] Sepsis-3 is defined as infection plus new organ dysfunction, defined as an increase in SOFA score of 2 or more points. In the CMPD, this is operationalised as evidence of infection from the primary or secondary reason for admission to the critical care unit plus organ dysfunction, defined as a SOFA score of 2 or more in any one organ system or a SOFA score of 1 in two or more organ systems, based on physiological data from the first 24 hours following admission. Full details of the organ dysfunction definitions are summarised in Table 1.

References

1. Singer M, Deutschman CS, Seymour CW, Shankar-Hari M, Annane D, Bauer M, et al. The third international consensus definitions for sepsis and septic shock (Sepsis-3). JAMA 2016; 315:801–10.

Table 1. Sepsis-3 organ dysfunction definitions (SOFA) and CMPD definitions

Organ dysfunction	SOFA	Definitions used in CMPD
Cardiovascular		
1 point	Mean arterial pressure (MAP) < 70 mmHg	MAP < 70 mmHg (calculated from lowest systolic blood pressure and paired diastolic blood pressure)
2 or more points	Administration of vasopressors	Advanced cardiovascular support (CCMDS)
Respiratory		
1 point	PaO_2/FiO_2 < 400 mmHg	PaO_2/FiO_2 < 400 mmHg (based on arterial blood gas with lowest PaO_2)
2 or more points	PaO_2/FiO_2 < 300 mmHg	PaO_2/FiO_2 < 300 mmHg
Renal[a]		
1 point	Serum creatinine 1.2-1.9 mg dl^{-1} (110-170 µmol l^{-1})	Serum creatinine 1.2-1.9 mg dl^{-1} (110-170 µmol l^{-1})
2 or more points	Serum creatinine ≥ 2 mg dl^{-1} (≥ 171 µmol l^{-1}) or urine output < 500 ml	Serum creatinine ≥ 2 mg dl^{-1} (≥ 171 µmol l^{-1}) or urine output < 500 ml or renal support (CCMDS)
Haematological		
1 point	Platelet count < 150 × 10^9 l^{-1}	Platelet count < 150 × 10^9 l^{-1}
2 or more points	Platelet count < 100 × 10^9 l^{-1}	Platelet count < 100 × 10^9 l^{-1}
Neurological		
1 point	GCS 13-14	GCS 13-14
2 or more points	GCS ≤ 12	GCS ≤ 12 or sedated for entire first 24hrs

Hepatic[b]		
1 point	Serum bilirubin 1.2-1.9 mg dl^{-1} (20-32 µmol l^{-1})	Unable to assess
2 or more points	Serum bilirubin ≥ 2 mg dl^{-1} (≥ 33 µmol l^{-1})	Liver support (CCMDS)

[a]Renal points do not count towards meeting the Sepsis 3 definition for admissions with chronic renal disease (Requirement for chronic renal replacement therapy)
[b]Hepatic points do not count towards meeting the Sepsis 3 definition for admissions with chronic liver disease (biopsy-proven cirrhosis, portal hypertension or hepatic encephalopathy)

APPENDIX 4; AKI DEFINITION

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Definition: Acute kidney injury (KDIGO) during the first 24 hours following admission to the critical care unit

The Case Mix Programme Database (CMPD) contains data that were collected, primarily, for case mix adjustment. Most of the admission data relate to the first 24 hours following admission to the critical care unit, with some data on medical history and reasons for admission. Thus, the CMPD can be used to identify admissions that had acute kidney injury at admission to the unit or that developed acute kidney injury during the first 24 hours in the unit but cannot be used to identify admissions that developed acute kidney injury after the first 24 hours following admission to the unit.

Definitions and staging of acute kidney injury in the CMPD are based on those of the Kidney Disease: Improving Global Outcomes (KDIGO) Clinical Practice Guideline for Acute Kidney Injury 2012.[1] The definitions have been adapted for use in observational data from the first 24 hours in critical care based on previous published research studies.

The KDIGO definitions and the modifications used in the CMPD are summarised in Table 1.

As baseline creatinine is not recorded in the CMPD, this was estimated by inverting the Modification of Diet in Renal Disease (MDRD) equation, assuming a glomerular filtration rate (GFR) of 75 ml/min per 1.73 m^2:

$$eGFR = 175 \times (Cr/88.4)^{-1.154} \times age^{-0.203} \times 1.212 \text{ [if black]} \times 0.742 \text{ [if female]}$$ where Cr is creatinine in µmol/l

When a patient stays in the unit for less than 24 hours, the reported urine output is scaled up to represent a 24h value. When neither an actual or estimated weight is reported in the CMPD, a value of 80 kg is assumed for males and 70 kg for females.

References

1. Kidney Disease: Improving Global Outcomes. KDIGO Clinical Practice Guideline for Acute Kidney Injury. *Kidney International Supplements* 2012; 2:1.

Table 1. Acute kidney injury definitions (KDIGO) and CMPD definitions

AKI Stage	KDIGO	Definitions used in CMPD
1	Serum creatinine 1.5–1.9 times baseline OR Serum creatinine ≥0.3 mg/dl (≥26.5 µmol/l) increase OR Urine output <0.5 ml/kg/h for 6-12 hours	Serum creatinine 1.5–1.9 times baseline[a] OR Serum creatinine ≥26 µmol/l increase from baseline[a] OR 24h urine output ≤18 ml/kg[b]
2	Serum creatinine 2.0–2.9 times baseline OR Urine output <0.5 ml/kg/h for ≥12 hours	Serum creatinine 2.0–2.9 times baseline[a] OR 24h urine output ≤15 ml/kg[c]
3	Serum creatinine 3.0 times baseline OR Increase in serum creatinine to ≥4.0 mg/dl (≥353.6 µmol/l) OR Initiation of renal replacement therapy OR In patients <18 years, decrease in eGFR to <35 ml/min per 1.73 m^2 OR Urine output < 0.3 ml/kg/h for ≥24 hours OR Anurea for ≥12 hours	Serum creatinine 3.0 times baseline[a] OR Serum creatinine >354 µmol/l OR 24h urine output ≤3.6 ml/kg[d]

a) Baseline creatinine estimated using the MDRD equation assuming GFR = 75 ml/min per 1.73 m^2
b) Assumes 12 hours of normal urine output (1 ml/kg/h) and 12 hours at 0.5 ml/kg/h
c) Assumes 6 hours of normal urine output (1 ml/kg/h) and 18 hours at 0.5 ml/kg/h
d) Assumes 12 hours of anurea and 12 hours at 0.3 ml/kg/h

APPENDIX 5: The ICNARC$_{H\text{-}2023}$model

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The ICNARC model was originally published in 2007.1 It was the culmination of many years of work to establish the best risk prediction model for use in the Case Mix Programme. Although the ICNARC model has been demonstrated to have better performance among patients admitted to UK critical care units than other risk models, ongoing improvement work is essential to further improve accuracy.

In developing the new ICNARC model, we addressed further areas for improvement, including handling of missing data, continuous nonlinear modelling of physiological predictors and making better use of available data from the hierarchical coding of reasons for admission to the critical care unit. We continue to seek improvements to this model to ensure that the risk predictions in all of ICNARC's reports are as accurate as possible. The new ICNARC model was published in 2015 as the ICNARC$_{H\text{-}2014}$model, and was subsequently recalibrated as the ICNARC$_{H\text{-}2015}$ model and the ICNARC$_{H\text{-}2018}$model. The ICNARC$_{H\text{-}2013}$ model is the latest recalibration using data for 148,903 admissions to 268 critical care units between 1 January 2022 and 31 December 2022.

Recalibration ensures that comparisons are relative to current, not historic, performance. Please note: although we still report using the ICNARC Physiology Score as a measure of severity of illness, this is not used in the calculation of risk in the new ICNARC model. In the ICNARC$_{H\text{-}2013}$model, physiology data feed directly into the prediction of mortality and no physiology score is used.

Risk predictions in the ICNARC$_{H\text{-}2023}$ model are based on:

- Physiological parameters during the first 24 hours following admission to the critical care unit:
  - highest heart rate (min−1);
  - lowest systolic blood pressure (mmHg);
  - highest temperature (°C) – if no central temperature was recorded, the highest non-central temperature +1°C is used;
  - lowest respiratory rate (min−1) – either ventilated or non-ventilated; o ratio of the lowest PaO2 (kPa) to the associated FiO2;

  - lowest arterial pH;
  - associated PaCO2 (kPa) from the arterial blood gas with the lowest arterial pH;
  - highest blood lactate (mmol l−1);
  - total urine output (ml) – for admissions with a length of stay less than 24 hours, the total over the entire stay is recorded and scaled to represent a 24-hour equivalent;
  - highest urea (mmol l−1);
  - highest creatinine (µmol l−1);
  - highest sodium (mmol l−1);
  - lowest white blood cell count (×109 l −1);
  - lowest platelet count (×109 l −1); and
  - Glasgow Coma Score plus additional weightings for patients sedated or paralysed and sedated for the whole of the first 24 hours in the unit (or entire stay, if less than 24 hours).
- Age in whole years at admission to the critical care unit
- Past medical history, evident during the six months prior to admission to the critical care unit and documented prior to or at admission to the unit, of:
  - severe liver disease – biopsy-proven cirrhosis, portal hypertension or hepatic encephalopathy;
  - metastatic disease – distant metastases documented by surgery, imaging or biopsy;
  - haematological malignancy – acute or chronic myelogenous leukemia, acute or chronic lymphocytic leukemia, multiple myeloma or lymphoma;
  - severe respiratory disease – permanent shortness of breath with light activity due to pulmonary disease or receiving home ventilation; and/or
  - immunocompromise – daily high-dose steroid treatment, chemotherapy, radiotherapy, congenital immunohumoral or cellular immune deficiency state or AIDS.

- Dependency prior to admission to acute hospital – assessed as the best description for the dependency of the patient in the two weeks prior to admission to acute hospital and prior to the onset of the acute illness and categorised as able to live without assistance, some (minor/major) assistance or total assistance with daily activities.
- Cardiopulmonary resuscitation (CPR) prior to admission – internal or external cardiac massage received within 24 hours prior to admission to the critical care unit, categorised as in-hospital CPR, community CPR or no CPR.
- Mechanical ventilation – mechanical ventilation at any time during the first 24 hours following admission to the critical care unit, identified via the recording of a ventilated respiratory rate.

- Source of admission – categorised as emergency department/not in hospital (split by planned vs. unplanned admission), theatre following elective/scheduled surgery (split by planned vs. unplanned admission), theatre following emergency/urgent surgery, ward/intermediate care area, other critical care unit (split by repatriation vs. planned/unplanned transfer) and other acute hospital (not critical care).
- Primary reason for admission – categorical combinations of body system and pathological/ physiological process (e.g. respiratory infection) or individual conditions from the hierarchical ICNARC Coding Method.
- Interactions between physiological parameters and:
    - other physiological parameters;
    - past medical history (severe liver disease);
    - interventions (CPR, mechanical ventilation); and
    - primary reason for admission.
- Interactions between age and past medical history of:
    - metastatic disease;
    - haematological malignancy; and
    - immunocompromise.

Exclusions

Admissions are excluded from calculation of the ICNARC$_{H\text{-}2023}$ model predicted risk of death if they are admitted solely for the purposes of organ donation or if they are dead or have had all active treatment withdrawn on admission to the unit. In rare cases, there may be insufficient data to calculate a risk prediction; this includes admissions with no evidence available to abstract physiology data. Readmissions of the same patient within the same acute hospital stay and admissions missing ultimate acute hospital outcome are excluded from comparisons of observed and expected mortality.

References

1. Harrison DA, Parry GJ, Carpenter JR, Short A, Rowan K. A new risk prediction model for critical care: the Intensive Care National Audit & Research Centre (ICNARC) model. Crit Care Med 2007; 35:1091–8.
2. Harrison DA, Ferrando Vivas P, Shahin J, Rowan KM. Ensuring comparisons of health-care providers are fair: development and validation of risk prediction models for critically ill patients. Health Serv Deliv Res 2015; 3(41)

APPENDIX 6; ICNARC REPORTING TIMES

ICNARC
Napier House
24 High Holborn
London WC1V 6AZ
Tel +44 (0)20 7831 6878
Email cmp@icnarc.org

The Customer will:

Ensure all participating Units are 'actively' participating according to the strict timelines for data collection, submission, validation, and reporting. Active participation in the ICNARC CMP defined as:

- unit submits and validates data regularly on Platform X (e.g., weekly); and
- unit fully validates a quarter of data within 6 weeks of quarter end

The Supplier will:

- Issue Quarterly Quality Reports (QQRs) to each unit within twelve working weeks of quarter end, unless otherwise agreed with the Unit.
- QQR Reporting is with the proviso that QQRs are run when at least 30% of participating Units (CMP and INICUA) have fully validated, clean data. This allows for sufficient data for comparative benchmarking. When there is a delay in the target submission date, there is a delay in the release date of the QQR.

Both Supplier and Customer will:

- **Assign sufficient resources to meet these reporting turnaround times** with suitably experienced backup resources available if required.

Ensure INICUA Coordinators work to the following process as agreed with ICNARC and NOCA:

Data Validation Process Flow using Platform X reporting

APPENDIX 7; SELECTING UNITS WITH A SIMILAR ADMISSION

ICNARC
Napier House
24 High Holborn
London WC1V 6AZ
Tel +44 (0)20 7831 6878
Email cmp@icnarc.org

Selecting units with a similar admission profile for the CMP Quarterly Quality Report

In the Case Mix Programme Quarterly Quality Report (QQR), quality indicator results for the critical care unit are compared with those for a group of units with a similar admission profile. This document describes the process used to select the group of units with a similar admission profile for reporting in the QQR.

Specialist critical care units

For critical care units in the following categories, units with a similar admission profile are all other critical care units in the same category:

- specialist neurosciences critical care units;
- combined general and neurosciences critical care units;
- specialist cardiothoracic critical care units;
- non-NHS (independent sector) critical care units.

For the one specialist liver critical care unit, units with a similar admission profile are adult general critical care units with at least 10% of admissions having a liver-related condition as either the primary or secondary reason for admission to the critical care unit.

For critical care units in specialist cancer hospitals, units with a similar admission profile are adult general critical care units with at least 10% of admissions having either metastatic disease or haematological malignancy in their past medical history.

Standalone high dependency units and post-operative critical care units

For standalone high dependency units and post-operative critical care units (where the majority of care delivered is at Level 2), units with a similar admission profile are other critical care units in this category with a similar proportion of admissions direct from theatre and recovery in the same hospital.

This proportion is calculated for each unit based on the data for the current year to date and the entire of the preceding year. The difference in the proportion between the unit on which the report is being run and all other units is calculated and all units that are within a distance of ±0.15 (i.e. 15% above or below) are selected as units with a similar admission profile. If this does not identify at least 10 units with a similar admission profile, then the distance is increased up to a maximum of
0.75 until 10 units with a similar admission profile are identified.

General critical care units

For all other critical care units, units with a similar admission profile are selected according to how similar they are on the following factors:

- the number of admissions per quarter (square root transformation with weight 1/20);
- the proportion of admissions direct from theatre and recovery in the same hospital (with weight 1);
- the proportion of bed days of care delivered at Level 3 (with weight 1); and
- the proportions of admissions with each of the following codes recorded as the specialty code prior to admission to the unit (each with weight 1):

    Surgical Specialties:
    - Urology (101);
    - Transplantation surgery (102);
    - Colorectal surgery (104);
    - Hepatobiliary & pancreatic surgery (105);
    - Upper gastrointestinal surgery (106);
    - Vascular surgery (107);
    - Trauma & orthopaedics (110); and
    - Thoracic surgery (173);

    Medical Specialties:
    - Gastroenterology (301);
    - Cardiology (320); and
    - Respiratory medicine (340).

The specialties above were identified based on substantial variability in the proportions of admissions across units, i.e. many units with none or very low proportions and some units with substantial proportions (>10% of admissions).

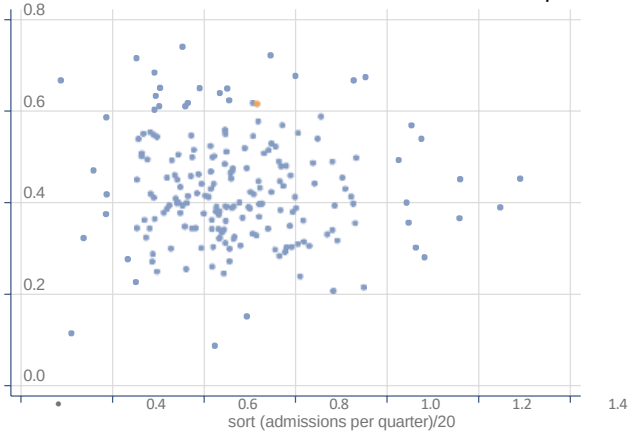
Each of the above values is calculated for each unit based on the data for the current year to date and the entire of the preceding year.

The distance between the unit on which the report is being run and all other units is calculated and all units that are within a distance of ±0.15 are selected as units with a similar admission profile. If this does not identify at least 20 units with a similar admission profile, then the distance is increased to 0.2. If, despite this increase, this does not identify at least 10 units with a similar admission profile, then the distance is increased up to a maximum of 0.75 until 10 units with a similar admission profile are identified.

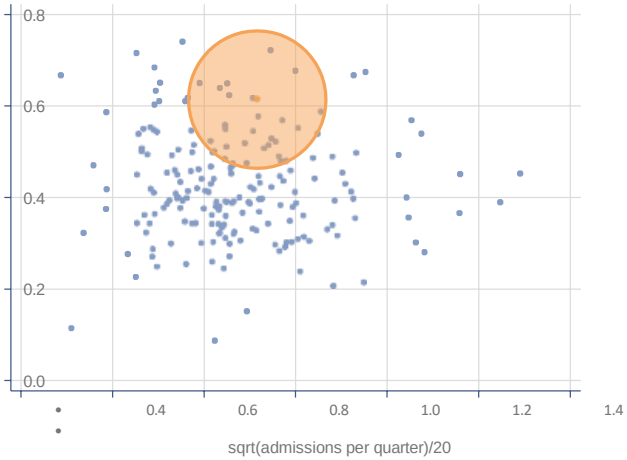
Example

The following example illustrates the approach using only two of the above factors (number of admissions per quarter and proportion of bed days at Level 3). Suppose we are running a report for a general critical care unit for the period 1 April to 30 September 2019.

- Load all data from general critical care units from 1 April 2018 to 30 September 2019 and calculate for each unit:
  - the square root of the number of admissions per quarter divided by 20; and
  - the proportion of bed days of care delivered at Level 3.
- We can plot the values of these two factors for each unit in a scatter plot. The point for the unit whose report we are running is highlighted in orange:

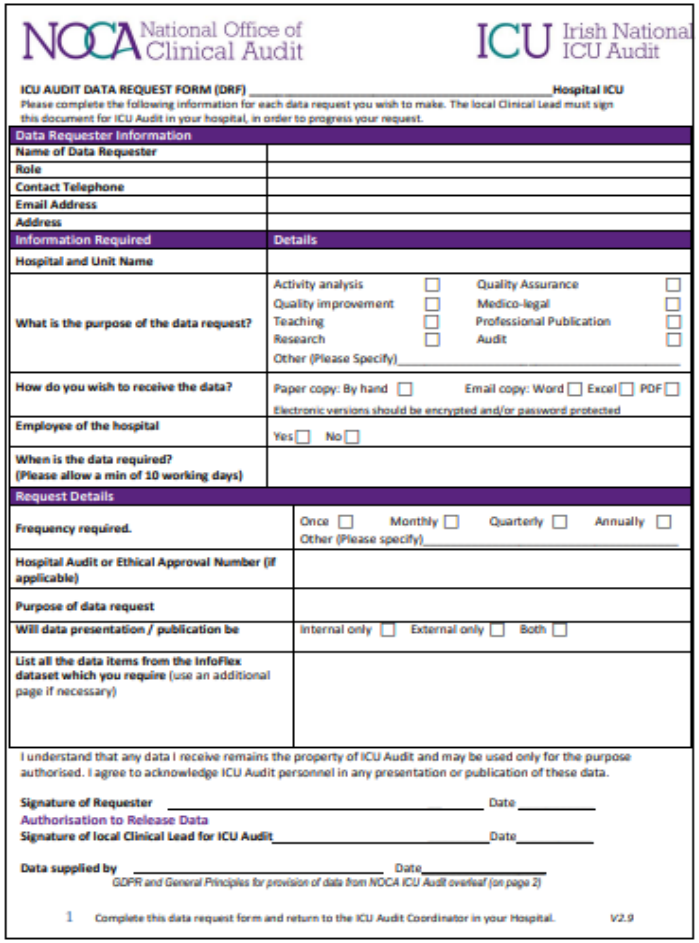


- Units with a similar admission profile are selected by drawing a circle around the orange point. The example below uses a distance (the radius of the circle) of 0.15:



- The units with a similar admission profile are all units within the shaded orange circle. If the circle did not include at least 20 units, we would use a distance of 0.2. If this still did not include at least 10 units, we would make it larger until 10 units were included (or the maximum distance of 0.75 was reached).

APPENDIX 8; ICU AUDIT DATA REQUEST FORM



NOCA National Office of Clinical Audit

ICU Irish National ICU Audit

ICU AUDIT DATA REQUEST FORM (DRF) _____ **Hospital ICU**

Please complete the following information for each data request you wish to make. The local Clinical Lead must sign this document for ICU Audit in your hospital, in order to progress your request.

Data Requester Information	
Name of Data Requester	
Role	
Contact Telephone	
Email Address	
Address	
Information Required	**Details**
Hospital and Unit Name	
What is the purpose of the data request?	Activity analysis ☐ Quality Assurance ☐ Quality improvement ☐ Medico-legal ☐ Teaching ☐ Professional Publication ☐ Research ☐ Audit ☐ Other (Please Specify)_____
How do you wish to receive the data?	Paper copy: By hand ☐ Email copy: Word ☐ Excel ☐ PDF ☐ Electronic versions should be encrypted and/or password protected
Employee of the hospital	Yes ☐ No ☐
When is the data required? (Please allow a min of 10 working days)	
Request Details	
Frequency required.	Once ☐ Monthly ☐ Quarterly ☐ Annually ☐ Other (Please specify)_____
Hospital Audit or Ethical Approval Number (if applicable)	
Purpose of data request	
Will data presentation / publication be	Internal only ☐ External only ☐ Both ☐
List all the data items from the InfoFlex dataset which you require (use an additional page if necessary)	

I understand that any data I receive remains the property of ICU Audit and may be used only for the purpose authorised. I agree to acknowledge ICU Audit personnel in any presentation or publication of these data.

Signature of Requester _____ Date _____

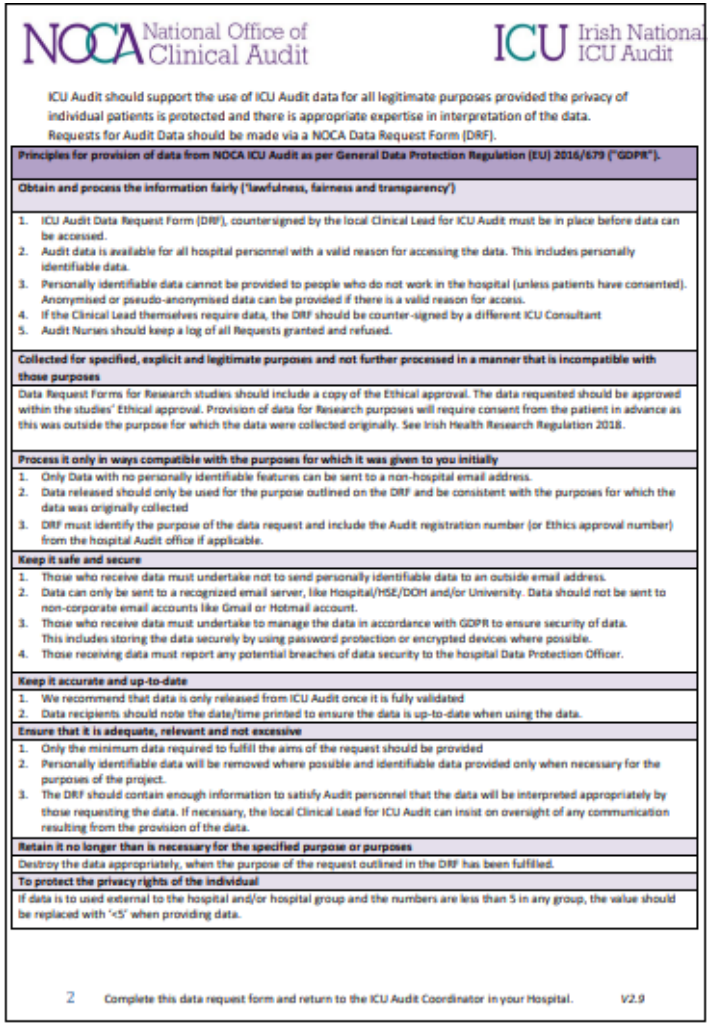
Authorisation to Release Data

Signature of local Clinical Lead for ICU Audit _____ Date _____

Data supplied by _____ Date _____

GDPR and General Principles for provision of data from NOCA ICU Audit overleaf (on page 2)

1 Complete this data request form and return to the ICU Audit Coordinator in your Hospital. V2.9



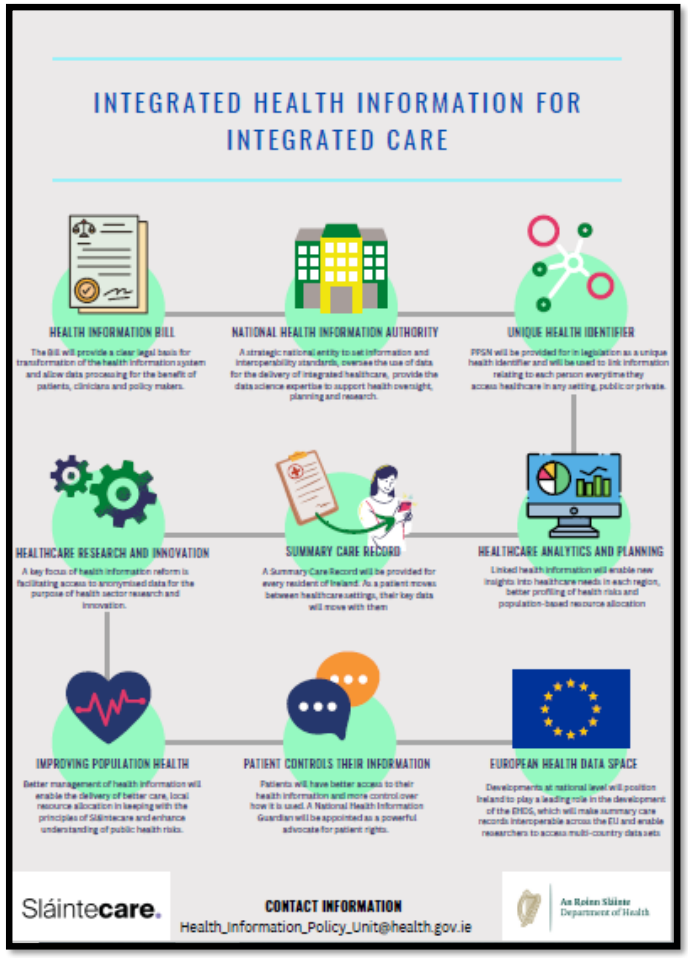
NOCA National Office of Clinical Audit ICU Irish National ICU Audit

ICU Audit should support the use of ICU Audit data for all legitimate purposes provided the privacy of individual patients is protected and there is appropriate expertise in interpretation of the data.
Requests for Audit Data should be made via a NOCA Data Request Form (DRF).

Principles for provision of data from NOCA ICU Audit as per General Data Protection Regulation (EU) 2016/679 ("GDPR").
Obtain and process the information fairly ('lawfulness, fairness and transparency')
1. ICU Audit Data Request Form (DRF), countersigned by the local Clinical Lead for ICU Audit must be in place before data can be accessed. 2. Audit data is available for all hospital personnel with a valid reason for accessing the data. This includes personally identifiable data. 3. Personally identifiable data cannot be provided to people who do not work in the hospital (unless patients have consented). Anonymised or pseudo-anonymised data can be provided if there is a valid reason for access. 4. If the Clinical Lead themselves require data, the DRF should be counter-signed by a different ICU Consultant 5. Audit Nurses should keep a log of all Requests granted and refused.
Collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes
Data Request Forms for Research studies should include a copy of the Ethical approval. The data requested should be approved within the studies' Ethical approval. Provision of data for Research purposes will require consent from the patient in advance as this was outside the purpose for which the data were collected originally. See Irish Health Research Regulation 2018.
Process it only in ways compatible with the purposes for which it was given to you initially
1. Only Data with no personally identifiable features can be sent to a non-hospital email address. 2. Data released should only be used for the purpose outlined on the DRF and be consistent with the purposes for which the data was originally collected 3. DRF must identify the purpose of the data request and include the Audit registration number (or Ethics approval number) from the hospital Audit office if applicable.
Keep it safe and secure
1. Those who receive data must undertake not to send personally identifiable data to an outside email address. 2. Data can only be sent to a recognized email server, like Hospital/HSE/DOH and/or University. Data should not be sent to non-corporate email accounts like Gmail or Hotmail account. 3. Those who receive data must undertake to manage the data in accordance with GDPR to ensure security of data. This includes storing the data securely by using password protection or encrypted devices where possible. 4. Those receiving data must report any potential breaches of data security to the hospital Data Protection Officer.
Keep it accurate and up-to-date
1. We recommend that data is only released from ICU Audit once it is fully validated 2. Data recipients should note the date/time printed to ensure the data is up-to-date when using the data.
Ensure that it is adequate, relevant and not excessive
1. Only the minimum data required to fulfill the aims of the request should be provided 2. Personally identifiable data will be removed where possible and identifiable data provided only when necessary for the purposes of the project. 3. The DRF should contain enough information to satisfy Audit personnel that the data will be interpreted appropriately by those requesting the data. If necessary, the local Clinical Lead for ICU Audit can insist on oversight of any communication resulting from the provision of the data.
Retain it no longer than is necessary for the specified purpose or purposes
Destroy the data appropriately, when the purpose of the request outlined in the DRF has been fulfilled.
To protect the privacy rights of the individual
If data is to used external to the hospital and/or hospital group and the numbers are less than 5 in any group, the value should be replaced with '<5' when providing data.

2 Complete this data request form and return to the ICU Audit Coordinator in your Hospital. V2.9

APPENDIX 9; INTEGRATED HEALTH INFORMATION POSTER



APPENDIX 10; LEVEL OF SUPPORT & LEVEL OF CARE

Level of Support	
Advanced Respiratory Support	• Ventilator supported breaths via ET/Trachy • Extracorporeal Respiratory Support
Basic Respiratory Support	• > 50% O2 therapy • Close Respiratory obs due to potential to deteriorate • 2 hrly physio/suction for secretion clearance • Recent extubation (within 24hrs) after > 24 hrs. ventilated • CPAP via Trachy (no vent support/no PS) • Intubation for Airway protection but no support • CPAP/BIPAP via mask/hood (airway natural)
Advanced Cardiovascular Support	• **Multiple** vasoactive/rhythm controlling drugs **IV** (e.g. inotropes, amiodarone, nitrate etc. of which at least 1 is an inotrope) • Continuous Observation of Cardiac Output • Intra-Aortic Balloon Pump • Temp cardiac Pacemaker while connected to functioning external pacemaker unit- **Pacer on**
Basic Cardiovascular Support	• CVP for monitoring or to deliver fluid for hypovolaemia • Arterial line for monitoring or blood sampling • **Single** vasoactive/rhythm controlling drug **IV** e.g. Inotrope, GTN
Renal Support	• Acute renal replacement Therapy-CVVHDF etc. • RRT for chronic renal failure (HD) where other acute organ support • HD performed off the unit is not included here
Neurological Support	• CNS depression sufficient to prejudice airway, **Not sedation for ventilation or low GCS due to drug overdose** • Invasive Neuro Monitoring • Continuous IV Medication for seizure control • ICP/Cerebral Monitoring • Therapeutic Hypothermia
GIT Support	• Parenteral or enteral Nutrition

Dermatological support	• >30% BSA Burns/Skin Rash/Exfoliation • Complex Dressings i.e. VAC, Open Abdomen, > 30% BSA
Liver Support	• Mix of coagulopathy/portal htn secondary to acute on chronic hepatocellular failure or primary acute hepatocellular failure
Levels of Care	
Level 3	• **Advanced Resp. Monitoring & support** **Monitoring and Support for 2 or more organs not GIT support**
Level 2	• Monitoring and Support for 1 organ **not GIT support** • Receiving Basic Resp. and Basic CVS Support • Pre surgical optimisation • Extended post-surgical care Admission stepping down from Level 3 to level 2 care
Level 1	• Admission recently discharged from a higher level of care Admission receiving a greater degree of observation than Level 0
Level 0	• Admission receiving normal ward care

Organ Support and Level of Care notes to assist NEW SITES kindly provided by Zieta and Michelle at SJH and modified for sharing by MB 2017