Data Collection Manual

ICNARC Case Mix Programme

Version 4.0

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Rules for data collection

Data

Data are collected for all admissions to your unit regardless of age, severity of illness, reason for admission, length of stay etc. For example, data are collected for readmissions as for a new admission. Data are collected for the same time period for all admissions - there are no exclusions and no exceptions.

Data that are measured and/or recorded in any part of the permanent written or electronic patient record are acceptable, for example, data from charts, case notes or any medium that comprises the permanent patient record. This is based on the assumption that all clinically important information is documented. Such an assumption is the only realistic standardisation possible at this time.

In specifying and defining the dataset, judgements have had to be made. It is recognised that such judgements will not comply with all opinions. It should be emphasised, however, that it is better to comply with rules and definitions which you deem incorrect than to substitute personal rules and/or definitions.

Missing data

If data are not available, are missing or measurements were not made, no value should be entered. It is not the aim of the Case Mix Programme to encourage unnecessary investigations and it is accepted that, for some fields (particularly biochemical and haematological ones), it may not be necessary to measure these for particular admissions.

Do not enter guesses or fabricated data. Where data are missing, these should be recorded as “NULL” and exported to ICNARC as blank fields. The value “0” must not be used to indicate missing numeric data. A value of “00:00:00” in any time field will be interpreted as true midnight (NULL times must be exported as blanks).

The first 24 hours in your unit

The first 24 hours in the unit commences at the time of admission to your unit, defined as the earliest documented time that an admission is physically in a bed in your unit, and ends precisely 24 hours later.

For patients admitted for pre-surgical preparation, the first 24 hours in your unit commences at the time of admission to your unit for pre-surgical preparation and ends precisely 24 hours later.
Time spent outside the unit during the first 24 hours, for example, while undergoing surgery, is counted when determining the first 24 hours in your unit.

Data recorded during the first 24 hours following admission to your unit but while the admission is outside the unit are valid only while the admission is managed by the unit team, for example, physiological data collected during surgery after admission but within the first 24 hours are excluded.

In the event of a cardiac arrest during the first 24 hours in your unit, data are valid except during active internal or external cardiac massage.

In the event of a formal documented decision to withdraw all active treatment, data are valid up to the time when treatment was first withdrawn, physiology data measured and recorded after this time should be disregarded.

In the event of brainstem death tests, data are valid up to and including the time of certification of brainstem death (the first set of tests), physiology data measured and recorded after this time should be disregarded.

In the event of death during the first 24 hours in your unit and, in the absence of either a formal documented decision to withdraw all active treatment or testing and certification of brainstem death, data are valid up to certification of death - agonal values are valid if charted.

ICNARC Coding Method

Where a required condition is not available or cannot be located in the ICNARC Coding Method, please complete as many tiers of the ICNARC Coding Method as possible (at least system and site) and describe the condition in the relevant incomplete code text field. These qualitative data, entered in the text fields, are used to improve the ICNARC Coding Method over time.

Absolute neutrophil count

Number of fields: Three

Fields: Lowest absolute neutrophil count
Highest absolute neutrophil count
or
Absolute neutrophil count missing

Units of measurement: $x10^{9}\ l^{-1}$

Definition for collection:

- lowest and highest absolute neutrophil count values measured and recorded in the first 24 hours in your unit
- the effects of steroids, inotropes and splenectomy are ignored
- if an admission stays less than 24 hours, then enter the lowest and highest absolute neutrophil count values measured and recorded while in your unit
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in near-patient testing/point-of-care testing laboratories with formal quality control programmes in operation
- if only one absolute neutrophil count value is measured and recorded, then this value is considered the lowest value
- if no absolute neutrophil count values are measured and recorded in the first 24 hours in your unit, then tick absolute neutrophil count missing

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Justification

Provides important information on haematology

Admission currently/recently pregnant

Number of fields: One

Field: Admission currently/recently pregnant

Options: Currently pregnant at admission to your unit
Recently pregnant at admission to your unit
Neither currently nor recently pregnant

Definition for collection:

- admission is currently or recently pregnant or neither at admission to your unit
- **Currently pregnant at admission to your unit** is any woman who is pregnant (including following fertility treatment or in whom a positive pregnancy test indicates the woman was pregnant) at time of admission to your unit even if test done after admission
- **Recently pregnant at admission to your unit** is 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
- **Neither currently nor recently pregnant** is any woman who is not pregnant or not known to be pregnant and includes any woman who has had a miscarriage, a termination of pregnancy, a stillbirth or a live birth (baby) greater than 42 days before the date of admission to your unit (i.e. not recently pregnant at admission to your unit)
- admission to your unit is the physical admission and recording of that admission to a bed in your unit

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Justification

Provides important information on obstetric critical illness

Admission number

Number of fields: One

Field: Admission number

Definition for collection:

- unique number assigned to each admission to your unit
- value should be automatically generated by software application as each admission record is created
- admission to your unit is the physical admission and the recording of that admission to a bed in your unit

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Justification

Provides a unique number for each admission to each unit participating in the Case Mix Programme

This field is part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR)

Admitted to your hospital via your ED

Number of fields: One

Field: Admitted to your hospital via your ED

Options: No
Yes

Definition for collection:

- specifies whether the admission to your unit was admitted to your hospital via your hospital emergency department (ED)

Justification

Provides important information on admission to your hospital

Admitted to your unit from *(any other route/transferred to your unit via)*

Number of fields: Five

Fields:
Transferred to your unit via
Admitted to your unit from
(Any other route – your hospital not via theatre)
Previously in
(Theatre, your hospital – any other route/
Any other route – your hospital not via theatre)
Admitted to your unit from
(any other route outside your hospital)
Previously in
(Any other route outside your hospital)

Definition for collection:

- fields detail the location(s) the admission was admitted to your unit from/was in prior to the admitting location

- these fields are collected where one of the following options is selected for the "Admitted to your unit from (*common routes*)" shortcuts field

    - Another critical care unit (via location for intervention or investigation)
        - Field collected: Transferred to your unit via
    - Theatre, your hospital – any other route
        - Field collected: Previously in
    - Any other route – your hospital not via theatre
        - Fields collected:
            - Admitted to your unit from
            - Previously in
    - Any other route outside your hospital
        - Fields collected:
            - Admitted to your unit from
            - Previously in

Options:	ED, your hospital Imaging, your hospital Specialist treatment area, your hospital Temporary critical care location, your hospital Clinic, Your hospital Emergency admissions unit, your hospital Ward, your hospital Obstetrics, your hospital Intermediate care ward/unit, your hospital ED, other acute hospital Theatre, other acute hospital Imaging, other acute hospital Specialist treatment area, other acute hospital Temporary critical care location, other acute hospital Clinic, other acute hospital Emergency admissions unit, other acute hospital Ward, other acute hospital Obstetrics, other acute hospital Intermediate care ward/unit, other acute hospital Non-acute hospital Not in hospital

- the options for these fields are a combination of the location (either for intervention or investigation or that the patient was admitted to) and the hospital housing that location
- definitions set out below first define the hospital (or not in hospital) and then the locations within the (acute) hospital
- definitions for hospitals:
    - **Your hospital** is the hospital housing your critical care unit
    - **Other Acute hospital**, one that does not house your critical care unit, is another hospital (can be in the same or a different NHS Trust) that provides a range of acute hospital services to diagnose, treat and care for seriously ill or injured patients; some acute hospitals may provide only specialist services while others will provide general services
    - **Non-acute hospital** is another hospital (can be in the same or a different NHS Trust) that provides a range of short or long-term non-acute services
    - **Not in hospital** is not in hospital
- definitions for in-hospital locations:
    - **ED** is an emergency department in the hospital
    - **Theatre** is an operating theatre in the hospital

- **Imaging** is an X-ray, CT, MRI, PET or other department in the hospital dedicated to providing diagnostic imaging or interventional radiology

- **Specialist treatment area** includes endoscopy and catheter suites in the hospital

- **Temporary critical care location** is any area in the hospital used as a temporary critical care facility (e.g. recovery used as a temporary critical care area)

- **Clinic** is an out-patient or other clinic in the hospital

- **Emergency admissions unit** (or equivalent), is where adult emergency patients are assessed and initial management is undertaken by in-patient hospital teams prior to transfer to an appropriate ward or discharge

- **Ward** is a ward in the hospital

- **Obstetrics** is a delivery suite, labour ward or obstetrics ward in the Hospital

- **Intermediate care ward/unit** is a Cardiac Care Unit or other ward/unit in the hospital where the level of care is greater than the normal ward but is not an ICU or combined ICU/HDU or HDU (use text box to specify where)

Justification

Provides important information on source of admission

Admitted to your unit from *(common routes)*

Number of fields: One

Field: Admitted to your unit from *(common routes)*

Options:
Theatre, your hospital (previously ED or not in hospital)
Theatre, your hospital (previously on ward, your hospital)
ED, your hospital
Emergency admissions unit, your hospital
Ward, your hospital
Another critical care unit (via location for intervention or investigation)
Another critical care unit (directly)
Theatre, your hospital, any other route
Any other route within your hospital not via theatre
Any other route outside your hospital

Definition for collection:

- Common, shortcut, location options describing the route from which this admission was admitted to your unit
- **Theatre, your hospital (previously ED or not in hospital)** is admitted directly to your unit from Theatre and recovery in your hospital and previously located in either the Emergency Department (ED) in your hospital or in a non-hospital location
- **Theatre, your hospital (previously on ward, your hospital)** is admitted directly to your unit from Theatre and recovery in your hospital and previously located in a Ward in your hospital
- **ED, your hospital** is admitted directly to your unit from the ED in your hospital
- **Emergency admissions unit, your hospital** is admitted directly to your unit from the Emergency admissions unit in your hospital
- **Another critical care unit (via location for intervention or investigation)** is transferred to your unit from another critical care unit (ICU, ICU/HDU or HDU), via a location for intervention or investigation (e.g. Theatre, Specialist treatment area, Imaging)
    - if this option is selected, details of the location for intervention or investigation and the critical care unit the admission was transferred to your unit from are then collected via the "Transferred to your unit via" and "Transferred to your unit from" fields
- **Another critical care unit (directly)** is transferred directly to your unit from another critical care unit (ICU, ICU/HDU or HDU)
    - if this option is selected, details of the critical care unit the admission was transferred to your unit from are then collected via the "Transferred to your unit from" field
- **Theatre, your hospital, any other route** is admitted directly to your unit from Theatre in your hospital and previously in any other location other than ED (or not in hospital) or ward, your hospital
    - e.g. admitted to your unit from Theatre, your hospital and previously being transferred from a ward in another acute hospital)

- If this option is selected, details of the location prior to theatre, your hospital, are collected via the "Previously in" (Theatre, your hospital, any other route) field

- **Any other route within your hospital not via theatre** is admitted directly to your unit from any other location/route, within your hospital, not accounted for in other options above (i.e. not directly admitted to your unit from Theatre, ED, Emergency admissions unit or Ward in your hospital, and not transferred (either directly or indirectly) from another critical care unit.

    - e.g. admitted to your unit from imaging, your hospital, previously in a ward, your hospital

    - If this option is selected, details of the location(s) prior to admission to your unit are collected via the "Admitted to your unit from"/"Previously in" (Any other route – your hospital not via theatre) fields

- **Any other route outside your hospital** is admitted directly to your unit from any other location/route, outside your hospital, not accounted for in other options above (i.e. not admitted directly to your unit from any location within your hospital, and not transferred (either directly or via a location for intervention or investigation) from another critical care unit.

    - e.g. being admitted to your unit following a transfer from a ward in another acute hospital

    - If this option is selected, details of the location(s) prior to admission to your unit are collected via the "Admitted to your unit from"/"Previously in" (Any other route outside your hospital) fields

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Justification

Provides important information on source of admission

Any limitations on treatment at admission to your unit

Number of fields: Five

Fields: Any limitations on treatment at admission to your unit

- Not for invasive ventilation
- Not for renal replacement
- Not for CPR
- Any other limitation

Options: All fields

- Yes
- No

Definition for collection:

- **Any limitations on treatment at admission to your unit** specifies whether any documented limitations were placed on the treatment of the admission either prior to or at admission to your unit
- Must be documented either prior to or at admission to your unit (at admission being at the initial unit assessment)
- **Not for invasive ventilation** is documented not for invasive ventilation decision in place either prior to or at admission to your unit
- **Not for renal replacement** is documented not for renal replacement decision in place either prior to or at admission to your unit
- **Not for CPR** is documented, valid, DNACPR (Do Not Attempt Cardiopulmonary Resuscitation) decision in place either prior to or at admission to your unit
- **Any other limitation** is any other documented limitation on treatment (other than not for mechanical ventilation, not for CPR or not for renal replacement therapy) in place either prior to or at admission to your unit
    - includes ceiling in place on inotropes, antibiotics or not for non-invasive ventilation. Please specify other limitation in text box

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Justification

Provides important information on limitations on the treatment provided by the critical care unit

Any limitations on treatment in place at discharge from your unit/death

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Number of fields: Five

Fields: Any limitations on treatment in place at discharge from your unit/death

- Not for invasive ventilation
- Not for renal replacement
- Not for CPR
- Any other limitation

Options: All fields

- Yes
- No

Definition for collection:

- **Any limitations on treatment in place at discharge from your unit/death** specifies whether any documented limitations were in place on the treatment of the admission at discharge from your unit/death
- Must be either documented as being in place at discharge from your unit/death or documented prior to discharge/death and not subsequently reinstated
- **Not for invasive ventilation** is documented not for invasive ventilation decision in place at discharge from your unit/death
- **Not for renal replacement** is documented not for renal replacement decision in place at discharge from your unit/death
- **Not for CPR** is documented, valid, DNACPR (Do Not Attempt Cardiopulmonary Resuscitation) decision in place at discharge from your unit/death
- **Any other limitation** is any other documented limitation on treatment (other than not for mechanical ventilation, not for CPR or not for renal replacement therapy) in place at discharge from your unit/death
    - includes ceiling in place on inotropes, antibiotics or not for non-invasive ventilation. Please specify other limitation in text box

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Justification

Provides important information for interpreting outcome

Arterial pH

Number of fields:	Two	
Fields:	pH from arterial blood gas with lowest pH Associated $PaCO_2$ from arterial blood gas with lowest pH	
Units of measurement:	pH	pH
	$PaCO_2$	kPa

Definition for collection:

- lowest pH values with their associated $PaCO_2$ value from the same blood gas measured and recorded in the first 24 hours in your unit
- if an admission stays less than 24 hours, then enter the lowest pH value with the associated $PaCO_2$ value measured and recorded while on your unit
- if only one set of blood gas values is measured and recorded, then these values are considered the lowest pH and associated $PaCO_2$ value
- if two or more pH values provide the lowest pH value, then enter the lowest pH value with the lowest associated $PaCO_2$ value

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Justification

Weighted in the ICNARC model and APACHE II/III scores

Blood lactate

Number of fields: Two

Fields: Highest blood lactate
or
Blood lactate missing

Units of measurement: mmol l^{-1}

Definition for collection:

- highest blood lactate value measured and recorded in the first 24 hours in your unit
- if an admission stays less than 24 hours, then enter the highest blood lactate value measured and recorded while on your unit
- blood lactate values must be measured on arterial blood
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in near-patient testing/point of care testing laboratories with formal quality control programmes in operation
- blood lactate values can be taken from the blood gas analyser
- if only one blood lactate value is measured and recorded then this value is considered the highest value
- if no blood lactate values are measured and recorded in the first 24 hours in your unit, then tick blood lactate missing

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Justification

Weighted in the ICNARC model

Blood pressure

Number of fields: Four (two pairs)

Fields: Lowest systolic BP
Paired diastolic BP for lowest systolic BP
Highest systolic BP
Paired diastolic BP for highest systolic BP

Units of measurement: mmHg

Definition for collection:

- lowest and highest systolic blood pressure values measured and recorded in the first 24 hours in your unit plus the paired diastolic blood pressure values from the same measurement
- if an admission stays less than 24 hours, then enter the lowest and highest systolic blood pressure values plus the paired diastolic blood pressure values measured and recorded while in your unit
- blood pressure values are included irrespective of the measurement method used but should not be recorded for any admission during periods of iatrogenic disturbance, e.g. physiotherapy, turning, periods of crying etc.
- where blood pressure values are not measurable (i.e. undetectable), the value zero should be recorded
- if only one pair of blood pressure values was measured and recorded, then these values are considered to be the lowest systolic blood pressure and paired diastolic blood pressure values
- if two or more systolic blood pressures provide the lowest systolic blood pressure, enter the lowest systolic blood pressure with the lowest paired diastolic blood pressure
- if two or more systolic blood pressures provide the highest systolic blood pressure, enter the highest systolic blood pressure with the highest paired diastolic blood pressure

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Justification

Weighted in the ICNARC model and APACHE II/III scores. Provides important information for identification of sepsis (Sepsis-3/Sequential Organ Failure Assessment (SOFA))

Body composition

Number of fields:	Four	
Fields:	Height	
	Height estimated	
	Weight	
	Weight estimated	
Units of measurement:	Height	cm
	Weight	kg
Options:	Height/Weight estimated	
	No	
	Yes	

Definition for collection:

- height, in cm, of this admission to your unit
- if height is unobtainable, use estimated height and record Yes in Height estimated
- weight, in kg, of this admission to your unit
- if weight is unobtainable, use estimated weight and record Yes in Weight estimated

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Justification

Used to calculate/estimate Body Mass Index

Cardiopulmonary resuscitation (CPR) within 24 hours prior to admission to your unit

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Number of fields: One

Field: Cardiopulmonary resuscitation (CPR) within 24 hours prior to admission to your unit

Options: In-hospital CPR
Community CPR
No CPR

Definition for collection:

- CPR must be administered within 24 hours prior to admission to your unit - does not include CPR received before 24 hours prior to admission or after admission to your unit
- **In-Hospital CPR** is CPR administered by an in-hospital resuscitation team (or equivalent)
- **Community CPR** is CPR not administered by an in-hospital resuscitation team (or equivalent)
- admissions receiving both community and in-hospital CPR (both within 24 hours prior to admission to your unit) are coded as Community CPR
- CPR must include either internal or external cardiac massage
- precordial thumps or defibrillation without cardiac massage are excluded

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Justification

Provides important information on in-hospital and community CPR.
Weighted in the ICNARC model

Cardiovascular support

Number of fields: Three

Core Module

Fields: Basic cardiovascular support days
Advanced cardiovascular support days

Units of measurement: Calendar days

Daily Organ Support Module

Field: Cardiovascular support

Options: Advanced
Basic
No

Definition for collection:

- a calendar day is any complete calendar day (00:00-23:59) or part thereof, e.g. a patient admitted on 1 January 2019 at 23:45 and discharged on 3 January 2019 at 00:10 would be recorded as having received three calendar days of care

Core Module

- specifies the number of calendar days during which the admission received any basic or advanced cardiovascular support whilst on your unit

- record 1, 2, 3 etc for one, two, three etc calendar days; record 998 for 998 or more calendar days; record 999 for support occurring but number of days not known

Daily Organ Support Module

- specifies the cardiovascular support the admission received on each calendar day whilst admitted to your unit

Advanced Cardiovascular support - indicated by one or more of the following:

- receipt of multiple intravenous and/or rhythm controlling drugs (e.g. inotropes, amiodarone, nitrates etc.) (of which, at least one must be vasoactive) when used simultaneously to support or control arterial pressure, cardiac output or organ/tissue perfusion

- continuous observation of cardiac output and derived indices (e.g. with a pulmonary artery catheter, lithium dilution, pulse contour analyses, oesophageal doppler, impedance and conductance methods.)

- intra-aortic balloon pump in place and other assist devices

- temporary cardiac pacemaker (valid each day while connected for therapeutic reasons to a functioning external pacemaker unit)

Basic Cardiovascular support - indicated by:

- CVP (central venous pressure) line for CVP monitoring and/or for central venous access to deliver titrated fluids to treat hypovolaemia
- arterial line for monitoring of arterial pressure and/or sampling of arterial blood
- receipt of a single, intravenous, vasoactive drug to support or control arterial pressure, cardiac output or organ perfusion
- receipt of a single intravenous rhythm controlling drug to support or control cardiac arrhythmias

Note: If advanced and basic cardiovascular monitoring and support occur simultaneously, then only advanced cardiovascular monitoring and support should be recorded.

Justification

These fields are part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (Version 8.0, ISN: Amd 81/2010). These data support local, regional and national analysis, commissioning and Payment by Results (PbR). Level of care definitions are based on ICS Standards and Guidelines 2009

Central venous catheter

Number of fields: Two

Core Module

Field: Central venous catheter days

Units of measurement: Calendar days

Daily Organ Support Module

Field: Central venous catheter

Options: Yes
No

Definition for collection:

- a calendar day is any complete calendar day (00:00-23:59) or part thereof, e.g. a patient admitted on 1 January 2021 at 23:45 and discharged on 3 January 2021 at 00:10 would be recorded as having received three calendar days of care

Core Module

- specifies the number of calendar days during which the admission had a central venous catheter in place whilst on your unit
- record 1, 2, 3 etc for one, two, three etc calendar days; record 998 for 998 or more calendar days; record 999 for support occurring but number of days not known

Daily Organ Support Module

- record Yes for **Central venous catheter** for each calendar day the admission had a central venous catheter in place whilst on your unit

Central venous catheter

- is having a central venous catheter (central line, central venous line, or central venous access catheter) placed into a large vein for venous access

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Justification

Provides important information on cardiovascular interventions in the critical care unit, including a denominator for central venous catheter infections

Cerebrovascular disease/stroke

Number of fields: One

Field: Cerebrovascular disease/stroke

Options: No cerebrovascular disease/stroke
Cerebrovascular disease/stroke – no functional limitations
Cerebrovascular disease/stroke – with functional limitations

Definition for collection:

- **Cerebrovascular disease/stroke – no functional limitations** is previous documented cerebrovascular disease/stroke with no resulting functional limitations on daily activities
- **Cerebrovascular disease/stroke – with functional limitations** is previous documented cerebrovascular disease/stroke resulting in functional limitations on daily activities
- Functional limitations are defined as continuing objective neurological deficit evident on clinical examination, documented on admission
- documented prior to, or at, admission to your unit

Justification

Provides important information on medical history and for interpreting outcome

Chemotherapy

Number of fields: One

Field: Chemotherapy

Options: No
Yes

Definition for collection:

- admission has received drug treatment resulting in a lower resistance to infection (including drug treatment for malignancy, vasculitides, rheumatoid arthritis, inflammatory bowel disease, transplant rejection, etc)
- excludes treatment with corticosteroids alone
- receipt should be determined from the six months prior to admission to your unit
- documented prior to, or at, admission to your unit

Justification

Weighted in the ICNARC model and APACHE II/III scores

Chronic alcohol dependence

Number of fields: One

Field: Chronic alcohol dependence

Options: No
Yes

Definition for collection:

- In the opinion of the treating clinician, admission currently has chronic alcohol dependence
    - A dependent drinker usually experiences physical and psychological withdrawal symptoms if they suddenly cut down or stop drinking, often leading to relief drinking to avoid withdrawal symptoms
- Evidence informing the opinion must be documented prior to, or at, admission to your unit

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Justification

Provides important information on medical history and for interpreting outcome

Chronic cardiovascular disease

Number of fields: One

Field: Chronic cardiovascular disease

Options: No chronic cardiovascular disease
Chronic cardiovascular disease – no functional limitations
Chronic cardiovascular disease – symptoms with moderate activity
Severe chronic cardiovascular disease – symptoms with light activity
Very severe chronic cardiovascular disease – symptoms at rest

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Definition for collection:

- **Chronic cardiovascular disease – no functional limitations** is cardiac or peripheral vascular disease but without resulting limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitations, dyspnoea or anginal pain.
    - New York Heart Association Functional Classification - **I**
- **Chronic cardiovascular disease – symptoms with moderate activity** is cardiac or peripheral vascular disease resulting in slight limitations of physical activity. They are comfortable at rest. Ordinary physical activity results in fatigue, palpitations, dyspnoea or anginal pain.
    - New York Heart Association Functional Classification - **II**
- **Severe chronic cardiovascular disease – symptoms with light activity** is cardiac or peripheral vascular disease resulting in marked limitation of physical activity. They are comfortable at rest. Less than ordinary physical activity causes fatigue, palpitations, dyspnoea or anginal pain.
    - New York Heart Association Functional Classification - **III**
- **Very severe chronic cardiovascular disease – symptoms at rest** is cardiac or peripheral vascular disease. resulting in inability to carry on any physical activity without discomfort. Symptoms of cardiac insufficiency or of the anginal syndrome may be present even at rest. If any physical activity is undertaken, discomfort is increased.
    - New York Heart Association Functional Classification - **IV**
- see Appendix: New York Heart Association Functional Classification
- should be determined from the six months prior to admission to your unit
- documented prior to, or at, admission to your unit

Justification

Weighted in the APACHE II/III scores. Provides important information on medical history and for interpreting outcome

Chronic drug dependence

Number of fields: One

Field: Chronic drug dependence

Options: No
Yes

Definition for collection:

- In the opinion of the treating clinician, admission currently has chronic drug dependence
    - A dependent drug user usually experiences physical and psychological withdrawal symptoms if they suddenly cut down or stop using the drug(s), often leading to relief drug use to avoid withdrawal symptoms
- Evidence informing the opinion must be documented prior to, or at, admission to your unit

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Justification

Provides important information on medical history and for interpreting outcome

Chronic kidney disease

Number of fields: One

Field: Chronic kidney disease

Options: No chronic kidney disease
Chronic kidney disease – not dialysis dependent
Chronic kidney disease - dialysis dependent (end-stage)

Definition for collection:

- Chronic kidney disease is irreversible renal disease
- **Chronic kidney disease – not dialysis dependent** is irreversible renal disease not currently requiring dialysis
- **Chronic kidney disease - dialysis dependent (end-stage)** is irreversible renal disease requiring chronic renal replacement therapy (including, but not limited to, chronic haemodialysis, chronic haemofiltration and chronic peritoneal dialysis)
- should be determined from the six months prior to admission to your unit
- chronic kidney disease status is reassessed following kidney transplant
- documented prior to, or at, admission to your unit

Justification

Weighted in the APACHE II/III scores. Provides important information on medical history and for interpreting outcome

Chronic respiratory disease

Number of fields: One

Field: Chronic respiratory disease

Options:
No chronic respiratory disease
Chronic respiratory disease – no functional limitations
Chronic respiratory disease – SOB with moderate activity
Severe chronic respiratory disease – SOB with light activity
Very severe chronic respiratory disease –
SOB at rest and/or on home ventilation

Definition for collection:

- **Chronic respiratory disease – no functional limitations** is pulmonary disease but not troubled by breathlessness except on strenuous exercise
    - Modified Medical Research Council (MMRC) Dyspnoea Scale - **0**
- **Chronic respiratory disease – shortness of breath (SOB) with moderate activity** is pulmonary disease and either SOB when hurrying on the level or walking up a slight hill, or walks slower than people of the same age on the level because of breathlessness, or has to stop for breath when walking at own pace on the level
    - Modified Medical Research Council (MMRC) Dyspnoea Scale - **1 or 2**
- **Severe chronic respiratory disease – shortness of breath (SOB) with light activity** is pulmonary disease and stopping for breath after walking 100m or after a few minutes on the level
    - Modified Medical Research Council (MMRC) Dyspnoea Scale - **3**
- **Very severe chronic respiratory disease – shortness of breath (SOB) at rest and/or on home ventilation** is pulmonary disease and too breathless to leave the house or breathless when dressing or undressing and/or on home ventilation due to pulmonary disease.
    - Ventilation is where all or some of the breaths or a portion of the breaths (pressure support) are delivered by a mechanical device; ventilation can be simply defined as a treatment where some or all of the energy required to increase lung volume during inspiration is supplied by a mechanical device
    - CPAP (continuous positive airway pressure) for sleep apnoea does not fulfil the definition for home ventilation
    - Modified Medical Research Council (MMRC) Dyspnoea Scale - **4**
- see Appendix: Modified Medical Research Council (MMRC) Dyspnoea Scale
- should be determined from the six months prior to admission to your unit

- documented prior to, or at, admission to your unit

Justification

Weighted in the ICNARC model and APACHE II/III scores

Cirrhosis

Number of fields: One

Field: Cirrhosis

Options: No
Yes

Definition for collection:

- Admission has cirrhosis, diagnosed by biopsy, hepatic ultrasound scanning, hepatic CT scanning or hepatic MRI
- must have been imaging or biopsy proven, and liver transplant not subsequently received
- documented prior to, or at, admission to your unit

Justification

Weighted in the ICNARC model and APACHE II/III scores

Classification of surgery/procedure

Number of fields:	Two
Field:	Classification of surgery/procedure (conducted within 24 hours prior to admission to your unit) Classification of surgery/procedure (conducted within 24 hours after admission to your unit)
Options	Urgent/emergency Elective/Scheduled

Definition for collection:

- surgery is undergoing all or part of a surgical procedure or anaesthesia for a surgical procedure in an operating theatre or an anaesthetic room
- procedure is undergoing vascular and/or interventional radiology or endoscopic treatment either in an operating theatre, anaesthetic room, imaging department or a specialist treatment area (includes endoscopy and catheter suites in the hospital)
- **Urgent/emergency** surgery/procedure is either:
    - immediate intervention, where resuscitation (stabilisation and physiological optimisation) is simultaneous with intervention. Normally takes place within minutes of decision to operate; or
    - intervention as soon as possible after resuscitation (stabilisation and physiological optimisation) and normally takes place within hours of decision to operate.
- **Elective/Scheduled** surgery/procedure is either:
    - expedited treatment but not immediately life, limb or organ saving. Normally takes place within days of decision to operate; or
    - intervention booked in advance of routine admission to hospital at a time to suit patient, hospital and staff.
- elective/scheduled surgery initially postponed can subsequently become emergency or urgent surgery
- if more than one surgery/procedure is conducted within 24 hours prior to admission to your unit, or within first 24 hours after admission to you unit, select the classification of the most invasive/urgent type of surgery/procedure
- organ donation/retrieval is not considered surgery

Justification

Provides important information on surgery/procedure status. The National Confidential Enquiry into Perioperative Deaths (NCEPOD) Classification of Interventions (December 2004) is used (https://www.ncepod.org.uk/classification.html)

Clinical Frailty Scale

Number of fields: Two

Fields: Level of frailty

Clinical Frailty Scale

Options: Level of frailty

Not frail
Frail
Terminal but not frail

Clinical Frailty Scale

1 – Very Fit
2 – Well
3 – Managing Well
4 – Vulnerable
5 – Mildly Frail
6 – Moderately Frail
7 – Severely Frail
8 – Very Severely Frail
9 – Terminally Ill

Definition for collection:

- designed to indicate what the admission could do before the acute onset of the condition which necessitated admission to acute hospital
- assess as best description for the frailty of this admission in the two weeks prior to admission to acute hospital and prior to the onset of the acute illness i.e. “usual” frailty
- for babies/young children choose option relative for age i.e. a baby with no additional level of dependency is determined to be well
- Level of frailty provides broad categories as a guide to sections of the Clinical Frailty Scale
- Level of frailty: **Not frail**
    - Clinical frailty scale:

1 Very Fit – People who are robust, active, energetic and motivated. These people commonly exercise regularly. They are among the fittest for their age

2 Well – People who have no active disease symptoms but are less fit than category 1. Often, they exercise or are very active occasionally, e.g. seasonally

3 Managing Well – People whose medical problems are well controlled, but are not regularly active beyond routine walking

4 Vulnerable – While not dependent on others for daily help, often symptoms limit activities. A common complaint is being “slowed up”, and/or being tired during the day

- Level of frailty: **Frail**
    - Clinical frailty scale:

5 Mildly Frail – These people often have more evident slowing, and need help in high order IADLs (finances, transportation, heavy housework, medications). Typically, mild frailty progressively impairs shopping and walking outside alone, meal preparation and housework

6 Moderately Frail – People need help with all outside activities and with keeping house. Inside, they often have problems with stairs and need help with bathing and might need minimal assistance (cuing, standby) with dressing

7 - Severely Frail – Completely dependent for personal care, from whatever cause (physical or cognitive). Even so, they seem stable and not at high risk of dying (within ~ 6 months)

8 Very Severely Frail – Completely dependent, approaching the end of life. Typically, they could not recover even from a minor illness

- Level of frailty: **Terminal but not frail**
    - Clinical frailty scale:

9 Terminally ill – Approaching the end of life. This category applies to people with a life expectancy <6 months, who are not otherwise evidently frail

- it is recognised that these data are subjective, the important distinction is between not frail, frail and terminal but not frail

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Justification

Provides important information for interpreting outcome. Weighted in the ICNARC model

Reference

Rockwood K, Song X, MacKnight C, Bergman H, Hogan DB, McDowell I, Mitnitski A.
A global clinical measure of fitness and frailty in elderly people. *CMAJ.* 2005;173(5):489-95

Clostridium difficile present

Number of fields: One

Field: Clostridium difficile present

Options: Admission C. difficile
Unit-acquired C. difficile
No C. difficile
No samples taken

Definition for collection:

- **Admission C. difficile** is the detection of C. difficile toxin in any stool sample taken for microbiological examination after admission to your hospital and either prior to admission or in the first 48 hours following admission to your unit or in a stool sample taken after 48 hours if the diarrhoea was present on admission

- **Unit-acquired C. difficile** is the detection of C. difficile toxin in any stool sample taken for microbiological examination after 48 hours following admission to your unit and while admission still in your unit

- it is recognised that this will underestimate the true rate of unit-acquired infections, i.e. by excluding those in samples in the 48 hours following discharge from your unit

- **No C. difficile** is the absence of C. difficile toxin in any stool sample taken for microbiological examination after admission to your hospital and either prior to admission to or during the stay in your unit

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Justification

Provides important information on unit-acquired infection

CMP number

Number of fields: One

Field: CMP number

Definition for collection:

- unique unit identifier supplied by ICNARC to each unit participating in the Case Mix Programme
- value should be automatically generated by software application

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Justification

Provides a unique, confidential identifier for each unit participating in the Case Mix Programme

Condition for which surgery/procedure performed (within 24 hours prior to admission to your unit)

Number of fields: Three

Fields:
- Condition for which surgery/procedure performed (within 24 hours prior to admission to your unit)
- Condition for which surgery/procedure performed (within 24 hours prior to admission to your unit) - incomplete code text box
- Is condition for which surgery/procedure performed the primary reason for admission to your unit?

Options

Is condition for which surgery/procedure performed the primary reason for admission to your unit?
- Yes
- No

Definition for collection:

- condition for which the in-hospital surgery/procedure, conducted within 24 hours prior to admission to your unit, was performed
- if more than one surgery/procedure is conducted within 24 hours prior to admission to your unit, record the condition which required the most invasive/urgent surgery/procedure
- record Yes for "**Is condition for which surgery/procedure performed the primary reason for admission to your unit?**" if the condition for which surgery/procedure performed is deemed to be the most important underlying condition or reason for admission to your unit
- codes are generated by the ICNARC Coding Method (ICM)
- where the condition required to be coded is not available, code the condition as far as you can and then enter the name of the condition in the "**Condition for which surgery/procedure performed - incomplete code text box**" (periodically, these text data are used to update and improve the ICM)
    - **no identifiers (patient, nurse, doctor, unit, hospital) should be included in text data entered into this field**
- See the ICNARC website for an ICM builder and the ICM Guide, which provides further advice on using the ICM

Justification

Weighted in the ICNARC model and APACHE II/III scores

Condition for which surgery/procedure performed (within first 24 hours after admission to your unit)

Number of fields: Two

Fields: Condition for which surgery/procedure performed (within first 24 hours after admission to your unit)
Condition for which surgery/procedure performed (within first 24 hours after admission to your unit) - incomplete code text box

---

Definition for collection:

- condition for which the surgery/procedure, conducted within first 24 hours after admission to your unit, was performed
- if more than one surgery/procedure is conducted within first 24 hours after admission to your unit, record the condition which required the most invasive/urgent surgery/procedure
- codes are generated by the ICNARC Coding Method (ICM)
- where the condition required to be coded is not available, code the condition as far as you can and then enter the name of the condition in the "**Condition for which surgery/procedure performed - incomplete code text box**" (periodically, these text data are used to update and improve the ICM)
    - **no identifiers (patient, nurse, doctor, unit, hospital) should be included in text data entered into this field**
- See the ICNARC website for an ICM builder and the ICM Guide, which provides further advice on using the ICM

Justification

Provides important additional information to the Primary reason for admission to your unit

Congenital immunohumoral or cellular immune deficiency state

Number of fields: One

Field: Congenital immunohumoral or cellular immune deficiency state

Options: No
Yes

Definition for collection:

- admission has a documented congenital immunohumoral or congenital cellular immune deficiency state
- includes, but is not limited to, common variable immunodeficiency (CVID), agammaglobulinaemia including X linked (XLA), severe combined immunodeficiency (SCID), chronic granulomatous disease, IgA deficiency, IgG deficiency, functional antibody deficiency, hyper IgE syndrome, Wiskott Aldrich syndrome, chronic mucocutaneous candidiasis (CMCC), Di George syndrome, ataxia telangiectasia, leucocyte adhesion defect, complement deficiencies, C1 esterase inhibitor deficiency, Kostmann's syndrome

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Justification

Weighted in the ICNARC model and APACHE II/III scores

Connective tissue disease

Number of fields: One

Field: Connective tissue disease

Options: No
Yes

Definition for collection:

- admission has a documented autoimmune disorder of connective tissue
- includes, but is not limited to, rheumatoid arthritis, systemic lupus erythematosus (SLE) and sarcoidosis
- documented prior to, or at, admission to your unit

Justification

Provides important information on medical history and for interpreting outcome

CRE present

Number of fields: One

Field: CRE present

Options: Admission CRE
Unit-acquired CRE
No CRE
No Samples taken

Definition for collection:

- **Admission CRE** is presence of CRE (carbapenem resistant enterobacteria) in any sample taken for microbiological examination after admission to your hospital and either prior to admission, or in the first 48 hours following admission, to your unit
- **Unit-acquired CRE** is presence of CRE in any sample taken for microbiological examination after 48 hours following admission to your unit and while still in your unit
- it is recognised that this will underestimate the true rate of unit-acquired infections, i.e. by excluding those in samples in the 48 hours following discharge from your unit
- **No CRE** is absence of CRE in any sample taken for microbiological examination after admission to your hospital and either prior to admission to or during the stay in your unit
- “any sample” includes skin and/or nasal swabs or screens

Justification

Provides important information on unit-acquired infection

C-reactive protein

Number of fields: Two

Fields: Highest c-reactive protein
or
C-reactive protein missing

Units of measurement: mg l^{-1}

Definition for collection:

- highest C-reactive protein value measured and recorded in the first 24 hours in your unit
- if an admission stays less than 24 hours, then enter the highest C-reactive protein value measured and recorded while on your unit
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in near-patient testing/point of care testing laboratories with formal quality control programmes in operation
- if only one C-reactive protein value is measured and recorded then this value is considered the highest value
- if no C-reactive protein values are measured and recorded in the first 24 hours in your unit, then tick C-reactive protein missing

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Justification

Provides important biomarker information

Daily steroid treatment

Number of fields: One

Field: Daily steroid treatment

Options: No steroids
Low dose (< 0.1 mg kg^{-1} per day)
Moderate dose (≥ 0.1 to < 0.3 mg kg^{-1} per day)
High dose (≥ 0.3 mg kg^{-1} per day)

Definition for collection:

- Oral or IV corticosteroid, daily for the six months prior to admission to your unit
    - **Low dose** is receipt of **< 0.1 mg kg^{-1}** prednisolone or an equivalent dosage of another corticosteroid
    - **Moderate dose** is receipt of **≥ 0.1 to <0.3 mg kg-1** prednisolone or an equivalent dosage of another corticosteroid
    - **High dose** is receipt of **≥ 0.3 mg kg-1** prednisolone or an equivalent dosage of another corticosteroid
- documented prior to, or at, admission to your unit
- where bodyweight for an adult admission is unknown, assume 70kg
- where the dosage is increased/decreased during the six months prior to admission to your unit, the lower dose must be selected
    - e.g. if the patient receives < 0.1 mg kg^{-1} for 3 months and this is then increased to 0.2 mg kg^{-1} for three months, this should be recorded as **Low dose** as the patient will not have received 0.2 mg kg^{-1} every day for the six months prior to admission to your unit

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Justification

Weighted in the ICNARC model and APACHE II/III scores

Date of birth

Number of fields: Two

Fields: Date of birth
Estimated age

Definition for collection:

- date of birth for this admission to your unit
- if date of birth is unobtainable, use judgement to estimate age of admission

---

Justification

Used to calculate age

This field is part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR)

Date of discharge from your hospital

Number of fields: One

Field: Date of discharge from your hospital

Definition for collection:

- the latest documented date of the admission being physically within an acute in-patient bed in your hospital or the date of death in your hospital
- discharge from your hospital is the physical discharge and recording of that discharge from an acute in-patient bed in your hospital
- where more than one date of discharge from your hospital is documented, the latest documented date is recorded

---

Justification

Used to calculate length of stay in your hospital

Date of original admission to ICU/HDU

Number of fields: One

Field: Date of original admission to ICU/HDU

Definition for collection:

- the earliest documented date on which this admission was originally admitted for adult critical care and since when adult critical care has been continuous
- ICU/HDU is an ICU or a combined ICU/HDU or an HDU
- the date is not necessarily the date of admission to the ICU/HDU from which this admission has been transferred to your unit
- admission is the physical admission and recording of that admission to a bed in ICU/HDU
- where more than one date of original admission to ICU/HDU is documented, the earliest documented date is recorded

---

Justification

Used to calculate total length of stay in critical care

Date of original admission to/attendance at acute hospital

Number of fields: One

Field: Date of original admission to/attendance at acute hospital

---

Definition for collection:

- the earliest documented date on which this admission was originally admitted to/attended the first acute hospital for the current period of continuous in-patient treatment
- an acute hospital is any hospital providing a range of acute hospital services to diagnose, treat and care for seriously ill or injured patients; some acute hospitals may provide only specialist services while others will provide general services
- admission to acute hospital is the physical admission and recording of that admission to an acute in-patient bed in another acute hospital, not your hospital, i.e. not the hospital housing your unit
- attendance at acute hospital is the physical attendance and recording of that attendance in another acute hospital, not your hospital, i.e. not the hospital housing your unit
- the date is not necessarily the date of admission to/attendance at the acute hospital from which the admission has been transferred to your unit
- where more than one date of original admission to/attendance at an acute hospital is documented, the earliest documented date is recorded

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Justification

Used to calculate total length of stay in hospital

Date of ultimate discharge from acute hospital

Number of fields: One

Field: Date of ultimate discharge from acute hospital

Definition for collection:

- the latest documented date of the admission being physically within an acute in-patient bed in an acute hospital, or the date of death, the acute hospital care having been continuous since discharge from your unit
- ultimate discharge from hospital is the physical discharge and recording of that discharge from an acute in-patient bed in an acute hospital
- an acute hospital is any hospital providing a range of acute hospital services to diagnose, treat and care for seriously ill or injured patients; some acute hospitals may provide only specialist services while others will provide general services
- where more than one date of ultimate discharge from acute hospital is documented, the latest documented date is recorded
- this is not necessarily the date of discharge from the acute hospital to which the admission was directly transferred

---

Justification

Used to calculate total length of hospital stay

Date of ultimate discharge from ICU/HDU

Number of fields: One

Field: Date of ultimate discharge from ICU/HDU

Definition for collection:

- the latest documented date on which this admission was ultimately discharged from critical care, the critical care having been continuous since discharge from your unit
- ultimate discharge is the physical discharge and recording of that discharge from a bed in ICU/HDU
- ICU/HDU is an ICU or a combined ICU/HDU or an HDU
- where more than one date of ultimate discharge from ICU/HDU is documented, the latest documented date is recorded
- the date is not necessarily the date of discharge from the ICU/HDU to which the admission was transferred from your unit

---

Justification

Used to calculate total length of stay in critical care

Date/Time body removed from your unit

Number of fields: Three

Fields: Date body removed from your unit
Time body removed from your unit
Died whilst temporarily outside your unit

Definition for collection:

- removal of the body from your unit is the physical removal of the body from a bed in your unit
- date body removed from your unit is the latest documented date of the body being physically in your unit
- time body removed from your unit is the latest documented time of the body being physically in your unit (24-hour clock)
- where more than one date/time body removed from your unit is documented, the latest documented date/time is recorded
- **Died whilst temporarily outside your unit** is admission died while physically outside your unit but before being discharged from your unit, e.g. in theatre or in transit to theatre

---

Justification

Used to calculate the total length of stay in your unit for non-survivors

Date/Time of admission to your hospital

Number of fields: Two

Field: Date of admission to your hospital
Time of admission to your hospital

Definition for collection:

- Date/Time of admission to your hospital is defined for the following hospital admission routes:
    - if the patient was admitted to your hospital via your hospital's emergency department (ED), the documented date/time of the decision to admit the patient at the start of the hospital provider spell when a consultant, nurse or midwife assumed responsibility for care in the hospital housing your unit;
        - Date/Time of registration at your ED is documented separately. Registration at your ED is the patient being registered at the ED in the hospital housing your unit
    - if the patient was transferred from another hospital; the documented date/time of arrival at the hospital housing your unit; or
    - if the patient took any other route to admission to your hospital (other than those noted above) the date/time of physical admission and recording of that admission to an acute in-patient bed in the hospital housing your unit
- essentially, record the date/time of admission to your hospital as documented within your hospital system
- where more than one date/time of admission to your hospital is documented, the earliest documented date/time is recorded
- hospital care in your hospital must be continuous up to the point of admission to your unit

---

Justification

Used to calculate length of stay in your hospital

Date/Time of admission to your unit

Number of fields: Two

Fields: Date of admission to your unit
Time of admission to your unit

Definition for collection:

- admission to your unit is the physical admission and recording of that admission to a bed in your unit
- date of admission to your unit is the earliest documented date of the admission being physically in a bed in your unit
- time of admission to your unit may be the time first charted if not documented as earlier in the case notes (24-hour clock)
- where more than one date/time of admission to your unit is documented, the earliest documented date/time is recorded

---

Justification

Used to calculate length of stay in your unit

This field is part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR)

Date/Time of death

Number of fields: Two

Fields: Date of death
Time of death

Definition for collection:

- For cardiac death
    - date of death in your unit as documented in the admission's clinical record
    - time of death in your unit as documented in the admission's clinical record (24-hour clock)
- For brainstem death
    - the date on which the completion of the first set of tests confirming brainstem death is recorded
    - the time at which the completion of the first set of tests confirming brainstem death is recorded (24-hour clock)

Justification

Provides important information for interpreting outcome

This field is part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR)

Date/Time of decision to admit to your unit

Number of fields: Two

Fields: Date of decision to admit to your unit
Time of decision to admit to your unit
Date/Time of decision to admit to your unit missing

Definition for collection:

- decision to admit to your unit is the record of the event that a clinical decision to admit a patient to your unit has been made
- date of decision to admit to your unit is the earliest documented date of the decision to admit to your unit
- time of decision to admit to your unit is the earliest documented time of the decision to admit to your unit (24-hour clock)
- includes the documented date/time a bed was requested on the electronic patient record (EPR)
- where more than one date/time of decision to admit to your unit is documented, the earliest documented date/time is recorded
- where date/time of decision to admit to your unit is not documented, tick Date/Time of decision to admit to your unit missing

---

Justification

Used to measure delay between decision to admit to your unit and admission to your unit

Guidelines for the provision of intensive care services (GPICS) state “There must be documentation in the patient record of the time and decision to admit to critical care”

Date/Time of decision to discharge from your unit

Number of fields: Two

Fields: Date of decision to discharge from your unit
Time of decision to discharge from your unit

Early discharge
Date/Time of decision to discharge from your unit not documented

---

Definition for collection:

- decision to discharge from your unit is the record of the event that a clinical decision to discharge the admission from your unit has been made
- date of decision to discharge from your unit is the documented date of the decision to discharge from your unit
- time of decision to discharge from your unit is the documented time of the decision to discharge from your unit (24-hour clock)
- includes the documented date/time when a formal request was made to the appropriate staff with authority to admit at the intended destination (e.g. hospital bed management system, PICU staff for retrieval, transfer for more-specialist care etc.)
- where discharge planning occurs in the expectation of, and in advance of, the admission being fully clinically ready for discharge – the latter date/time when fully clinically ready is recorded
- where more than one date/time of decision to discharge from your unit is documented, the latest documented date/time is recorded
- where date/time of decision to discharge from your unit equals date/time of discharge from your unit, enter the same values for both dates and times
- **Early discharge** is an unplanned discharge of an admission still requiring the current level of care (e.g. usually caused by a shortage of beds)
    - In the case of an early discharge Date/Time of decision to discharge from your unit should be left blank
- where date/time of decision to discharge from your unit is not documented/missing, tick **Date/Time of decision to discharge from your unit not documented**

Justification

This field is part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR)

Guidelines for the provision of intensive care services (GPICS) state “Discharge from critical care to a general ward must occur within four hours of the decision and must occur between 0700hrs and 2159hrs”

Date/Time of discharge from your unit

Number of fields: Two

Fields: Date of discharge from your unit
Time of discharge from your unit

Definition for collection:

- discharge from your unit is the physical discharge of an admission and the recording of that discharge from a bed in your unit
- discharge does not include temporary transfer from your unit, e.g. for surgery, radiology, or other investigation
- date of discharge from your unit is the latest documented date of the admission being physically in your unit
- time of discharge from your unit is the latest documented time of the admission being physically within your unit (24-hour clock)
- where more than one date/time of discharge from your unit is documented, the latest date/time is recorded

---

Justification

Used to calculate length of stay in your unit

This field is part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR)

Date/Time of registration at your ED

Number of fields: Two

Field: Date of registration at your ED
Time of registration at your ED

Definition for collection:

- registration at ED is the patient being registered at the emergency department (ED) in the hospital housing your unit
- date of registration at your ED is the earliest documented date of the admission being registered in the ED in the hospital housing your unit
- time of registration at your ED is the earliest documented time of the admission being registered in the ED in the hospital housing your unit (24-hour clock)
- where more than one date/time of registration at your ED is documented, the earliest documented date/time is recorded
- hospital care in your hospital must be continuous up to the point of admission to your unit

---

Justification

Used to calculate length of stay in your hospital

Date/Time treatment first withdrawn

Number of fields: Two

Fields: Date treatment first withdrawn
Time treatment first withdrawn

Definition for collection:

- date treatment first withdrawn is the documented date when one or more clinically indicated treatments other than comfort measures were withdrawn
(not the date of the decision), on the grounds of lack of benefit to the patient

- time treatment first withdrawn is the documented time when one or more clinically indicated treatments other than comfort measures were withdrawn (not the time of the decision), on the grounds of lack of benefit to the patient (24-hour clock)

- where more than one date/time treatment first withdrawn is documented, the earliest documented date/time is recorded

---

Justification

Provides important information for interpreting outcome

Dementia

Number of fields:	One
Field:	Dementia
Options:	No Yes

Definition for collection:

- admission has dementia
- documented prior to, or at, admission to your unit

Justification

Provides important information on medical history and for interpreting outcome

Dermatological support

Number of fields: Two

Core Module

Field: Dermatological support days

Units of measurement: Calendar days

Daily Organ Support Module

Field: Dermatological support

Options: Yes
No

Definition for collection:

- a calendar day is any complete calendar day (00:00-23:59) or part thereof, e.g. a patient admitted on 1 January 2021 at 23:45 and discharged on 3 January 2021 at 00:10 would be recorded as having received three calendar days of care

Core Module

- specifies the number of calendar days during which the admission received any dermatological support whilst on your unit

- record 1, 2, 3 etc for one, two, three etc calendar days; record 998 for 998 or more calendar days; record 999 for support occurring but number of days not known

Daily Organ Support Module

- specifies the dermatological support the admission received on each calendar day whilst admitted to your unit

Dermatological support – indicated by one or more of the following:

- major (e.g. greater than 30% body surface area affected) skin rashes, exfoliation or burns

- complex dressings (e.g. major – greater than 30% body surface area affected – skin dressings, open abdomen, vacuum dressings or large – multiple limb or limb and head – trauma dressings)

Justification

These fields are part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR). Level of care definitions are based on ICS Standards and Guidelines 2009

Diabetes mellitus

Number of fields: One

Field: Diabetes mellitus

Options: No diabetes
Diabetes – not insulin treated
Diabetes – insulin treated

Definition for collection:

- **Diabetes – not insulin treated** is diabetes mellitus not currently requiring treatment with insulin
- **Diabetes – insulin treated** is diabetes mellitus, requiring insulin treatment
- do not include gestational diabetes
- documented prior to, or at, admission to your unit

Justification

Provides important information on medical history and for interpreting outcome

Discharged from your hospital for palliative care

Number of fields: One

Field: Discharged from your hospital for palliative care

Options: Yes
No

Definition for collection:

- palliative care is withdrawal of care from which it is deemed that the admission can no longer benefit

---

Justification

Provides important information for interpreting outcome

Discharged from your hospital to

Number of fields: One

Field: Discharged from your hospital to

Options: Other acute hospital
Usual residence
Other location not in acute hospital

Definition for collection:

- the destination to which the admission was directly transferred post- discharge from your hospital, the hospital housing your unit
- **Other Acute hospital**, one that does not house your critical care unit, is another hospital (can be in the same or a different NHS Trust) that provides a range of acute hospital services to diagnose, treat and care for seriously ill or injured patients; some acute hospitals may provide only specialist services while others will provide general services
- **Usual residence** is the patient returning to the permanent/semi-permanent place of residence where they resided prior to admission to acute hospital
    - if usual residence is home, includes staying with relatives/friends
- **Other location not in acute hospital** is discharged to another location which is neither in acute hospital nor the location that was the admissions usual residence prior to admission to acute hospital

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Justification

Provides important information for interpreting outcome

Discharged from your unit to

Number of fields: One

Field: Discharged from your unit to

Options:
Non-critical care location, your hospital
Temporary critical care location, your hospital
ICU or ICU/HDU, your hospital
HDU, your hospital
ICU or ICU/HDU, other acute hospital
HDU, other acute hospital
Non-critical care location, other acute hospital
Temporary critical care location, other acute hospital
Usual residence
Other location not in acute hospital

Definition for collection:

- options describe the location(s) the admission was discharged from your unit to
- definitions set out below first define the hospital (or non-hospital location) and then the locations within the (acute) hospital
- definitions for hospitals
    - **Your hospital** is the hospital housing your critical care unit
    - **Other Acute hospital**, one that does not house your critical care unit, is another hospital (can be in the same or a different NHS Trust) that provides a range of acute hospital services to diagnose, treat and care for seriously ill or injured patients; some acute hospitals may provide only specialist services while others will provide general services
    - **Usual residence** is the patient returning to the permanent/semi-permanent place of residence where they resided prior to admission to acute hospital
        - if usual residence is home, includes staying with relatives/friends
    - **Other location not in acute hospital** is discharged to another location which is neither in acute hospital nor the location that was the admissions usual residence prior to admission to acute hospital
- definitions for in-hospital locations
    - **Non-critical care location** is any location within the hospital that the patient is admitted to, that is not critical care, e.g. ward, intermediate care ward/unit, obstetrics area
    - **Temporary critical care location** is any area in the hospital used as a temporary critical care facility (e.g. recovery used as a temporary critical care area)

- **ICU or ICU/HDU** is either an ICU or a combined ICU/HDU in the hospital providing both Level 3 and Level 2 care

- **HDU** is an HDU or equivalent step-up/step-down unit in the hospital, where the Critical Care Minimum Data Set (CCMDS) is collected

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Justification

Provides important information for interpreting outcome

This field is part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR)

Ethnicity

Number of fields: One

Field: Ethnicity

Options:

White - British
White - Irish
White - any other

Mixed - white and black Caribbean
Mixed - white and black African
Mixed - white and Asian
Mixed - any other

Asian or Asian British - Indian
Asian or Asian British - Pakistani
Asian or Asian British - Bangladeshi
Asian or Asian British - any other

Black or black British - Caribbean
Black or black British - African
Black or black British - any other

Other ethnic group - Chinese

Any other ethnic group

Not stated

Definition for collection:

- 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
- current NHS Data Dictionary ethnic codes are used
- where specific detail of ethnicity is not known, use relevant “other” codes (e.g. C, G, L, P, R, S)

Justification

Provides important information for demographic statistics

Evidence available to abstract physiology data

Number of fields: One

Field: Evidence available to abstract physiology data

Options: Yes
No

Definition for collection:

- specifies whether evidence is available to abstract required physiology data
- evidence includes any relevant documentation such as charts, notes, electronic record etc.

Justification

Acts as a filter field for further data entry

Evidence available to assess medical history

Number of fields: One

Field: Evidence available to assess medical history

Options: No
Yes

Definition for collection:

- specifies whether evidence is available to assess medical history
- evidence includes in- or out-patient hospital notes (doctors' or nurses' case notes), GP case notes, information from the admission or the admission's relatives, friends or GP
- evidence is valid only if recorded in the case notes prior to or at admission to your unit

---

Justification

Acts as a filter field for further data entry

Gastrointestinal interventions

Number of fields: Four

Core Module

Fields: Parenteral feeding at any time during unit stay
Enteral tube feeding at any time during unit stay

Daily Organ Support Module

Fields: Parenteral feeding
Enteral tube feeding

Options: All fields
Yes
No

Definition for collection:

Core Module

- fields each specify whether the admission received the specific type of gastrointestinal intervention (feeding) at any time during unit stay

Daily Organ Support Module

- a calendar day is any complete calendar day (00:00-23:59) or part thereof, e.g. a patient admitted on 1 January 2021 at 23:45 and discharged on 3 January 2021 at 00:10 would be recorded as having received three calendar days of care

- specifies the gastrointestinal intervention(s) the admission received on each calendar day whilst on your unit

Gastrointestinal interventions

- **Parenteral feeding** is being fed specialist nutritional products intravenously through the veins (jugular, subclavian, femoral or peripherally inserted central catheter (PICC))

- **Enteral feeding** is being fed specialist feeding products through an enteral tube (nose, mouth or percutaneous)

Justification

Provide important information on gastrointestinal interventions in the critical care unit

Gastrointestinal support

Number of fields: Two

Core Module

Field: Gastrointestinal support days

Units of measurement: Calendar days

Daily Organ Support Module

Field: Gastrointestinal support

Options: Yes
No

Definition for collection:

- a calendar day is any complete calendar day (00:00-23:59) or part thereof, e.g. a patient admitted on 1 January 2021 at 23:45 and discharged on 3 January 2021 at 00:10 would be recorded as having received three calendar days of care

Core Module

- specifies the number of calendar days during which the admission received any gastrointestinal support whilst on your unit

- record 1, 2, 3 etc for one, two, three etc calendar days; record 998 for 998 or more calendar days; record 999 for support occurring but number of days not known

Daily Organ Support Module

- specifies the gastrointestinal support the admission received on each calendar day whilst admitted to your unit

Gastrointestinal support – indicated by the following:

- receipt of parenteral or enteral nutrition (i.e. any method of feeding other than normal oral intake)

Justification

These fields are part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR). Level of care definitions are based on ICS Standards and Guidelines 2009

Gestation of pregnancy

Number of fields: One

Field: Gestation of pregnancy

Units of measurement: Weeks

Definition for collection:

- specifies the duration of gestation of pregnancy (whether current or recent), at admission to your unit, in completed weeks
- gestation is the number of weeks of pregnancy and is calculated from the last normal menstrual period
- currently pregnant is any woman who is known to be pregnant (including following fertility treatment) or in whom a pregnancy test is known to have been positive prior to or within the first 24 hours of admission to your unit
- recently pregnant is 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

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Justification

Provides important information on obstetric critical illness

Glasgow Coma Score

Number of fields: Four (one set)

Fields: Lowest total Glasgow Coma Score
Associated eye component
Associated motor component
Associated verbal component

Definition for collection:

- all four values assessed and recorded from the same assessment of the lowest total Glasgow Coma Score in the first 24 hours in your unit
- if an admission stays less than 24 hours, then enter the four values from the lowest total Glasgow Coma Score assessed and recorded while in your unit
- only Glasgow Coma Scores assessed when the admission is free from the effects of sedative and/or paralysing or neuromuscular blocking agents are valid
- for those sedated or paralysed and sedated for some of the first 24 hours i.e. (where for part of the day the admission is free from the effects of sedatives/paralysing agents and a valid assessment of the admission's neurological status is possible), the Glasgow Coma Score recorded must derive from the period free from the effects of sedatives/paralysing agents (given the important prognostic weight of neurological deficit)
- the determination as to whether an admission is free from the effects of sedative and/or paralysing or neuromuscular blocking agents is left to clinical judgement, as this is the only realistic standardisation for collection of these data at this time
- admissions due to self-sedation through deliberate or accidental overdose/poisoning should have a Glasgow Coma Score assessed
- the Glasgow Coma Score may be either documented as a score (e.g. as numbers) or as explicit text allowing precise assignment of the score (e.g. "fully alert and orientated" equals 15).
- if two or more Glasgow Coma Score assessments provide the lowest total Glasgow Coma Score, then enter the lowest total Glasgow Coma Score with the lowest associated motor component
- if only one set of Glasgow Coma Score values is assessed and recorded, then this set of values is considered the lowest total Glasgow Coma Score and associated values
- see Appendix: How to assess the Glasgow Coma Score

Justification

Weighted in the ICNARC model and APACHE II/III scores. Provides important information for identification of sepsis (Sepsis-3/Sequential Organ Failure Assessment (SOFA))

Haemoglobin

Number of fields: Three

Fields: Lowest haemoglobin
Highest haemoglobin
or
Haemoglobin missing

Units of measurement: g l^{-1}

Definition for collection:

- lowest and highest haemoglobin values measured and recorded in the first 24 hours in your unit
- if an admission stays less than 24 hours, then enter the lowest and highest haemoglobin values measured and recorded while in your unit
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in near-patient testing/point-of-care testing laboratories with formal quality control programmes in operation
- if only one haemoglobin value is measured and recorded, then this value is considered the lowest value
- if no haemoglobin values are measured and recorded in the first 24 hours in your unit, then tick haemoglobin missing

---

Justification

Weighted in the APACHE II/III scores

Heart rate

Number of fields: Two

Fields: Lowest heart rate
Highest heart rate

Units of measurement: beats min^{-1}

Definition for collection:

- lowest and highest heart (ventricular) rates measured and recorded in the first 24 hours in your unit
- if an admission stays less than 24 hours, then enter lowest and highest heart rates measured and recorded while in your unit
- for admissions who are paced, record the actual measured heart rate
- heart rates should not be recorded for any admissions during periods of iatrogenic disturbance, e.g. physiotherapy, turning, periods of crying etc.
- if only one heart rate is measured and recorded, then this value is considered the lowest value
- where no heart rate was measurable, the value zero should be recorded for the lowest heart rate

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Justification

Weighted in the ICNARC model and APACHE II/III scores

Hepatic encephalopathy

Number of fields: One

Field: Hepatic encephalopathy

Options: No
Yes

Definition for collection:

- admission has had episodes of hepatic encephalopathy, Grade 1 or greater
- should be determined from the six months prior to admission to your unit
- documented prior to, or at, admission to your unit
- see Appendix: Grading of hepatic encephalopathy

Justification

Weighted in the ICNARC model and APACHE II/III scores

HIV/AIDS

Number of fields: One

Field: HIV/AIDS

Options: No HIV/AIDS
HIV
AIDS

Definition for collection:

- **HIV** is definite diagnosis of HIV infection - positive HIV test confirmed by an accredited microbiology laboratory
- **AIDS** is HIV positive and an AIDS-defining illness (definite diagnosis of AIDS as per the current World Health Organisation definition) - includes pneumocystis pneumonia, Kaposi's sarcoma, lymphoma, tuberculosis and toxoplasma infection
(for an exhaustive list, please see: http://www.aidsmap.com/)
- documented prior to, or at, admission to your unit

Justification

Weighted in the ICNARC model and APACHE II/III scores

In-hospital set of observations recorded within 24 hours prior to referral for critical care expertise

---

Introduction:	Definitions for each field within the “In-hospital set of observations recorded within 24 hours prior to referral for critical care expertise” are set out in dataset order over the following pages
Number of fields:	Ten

Field 1 of 10:	In-hospital set of observations recorded within 24 hours prior to referral for critical care expertise
Options:	Yes No

Definition for collection:

- referral for critical care expertise is the first contact with a member of the critical care team that ultimately led to this admission to your unit
- if time of referral for critical care expertise is unknown, then use Date/Time of decision to admit to your unit or Date/Time of admission to your unit
- record Yes if at least one observation is available within the 24 hours prior to referral for critical care expertise
- find the last recorded observation prior to referral for critical care expertise and all other relevant values recorded within the previous hour (if two or more measurements for the same field are available, then record the latest)

Fields 2-3 of 10: Date set of observations taken
Time set of observations taken

- **Date set of observations taken** is the documented date of the last recorded observation prior to referral for critical care expertise
- **Time set of observations taken** is the documented time of the last recorded observation prior to referral for critical care expertise (24-hour clock)

Fields 4-8 of 10

Field:	Unit of measurement:
Temperature	°C
Systolic BP	mmHg
Heart rate	beats min^{-1}
Respiratory rate	breaths min^{-1}
SpO_2	%

Field 9 of 10: On respiratory support

Options: No
Oxygen
High flow nasal cannula
CPAP
Non-invasive support

- **Oxygen** is on oxygen
- **High-flow nasal cannula** is on high flow nasal cannula
- **CPAP** is on CPAP (continuous positive airway pressure)
- **Non-invasive support** is on non-invasive support through the upper airway using a mask or similar device

Field 10 of 10: ACVPU

Options:
Alert
Confusion
Voice
Painful
Unresponsive

- **Alert**: patient is fully awake with spontaneous opening of the eyes, will respond to voice and will have motor function
- **Confusion**: patient has new-onset confusion, disorientation and/or agitation, where previously their mental state was normal
- **Voice**: patient makes some kind of response when you talk to them, which could be in any of the three component measures of eyes, voice or motor
- **Painful**: patient makes a response on any of the three component measures on the application of pain stimulus, such as a central pain stimulus like a sternal rub or a peripheral stimulus such as squeezing the fingers
- **Unresponsive**: patient does not give any eye, voice or motor response to voice or pain (sometimes seen noted as 'Unconscious')

For detailed category descriptions, see Appendix: ACVPU

Justification

Used to calculate National Early Warning Score (NEWS2)

Reference

Royal College of Physicians. *National Early Warning Score (NEWS) 2: Standardising the assessment of acute-illness severity in the NHS*. Updated report of a working party. London: RCP, 2017

In-hospital surgery/procedure conducted within 24 hours prior to admission to your unit

---

Number of fields: One

Field: In-hospital surgery/procedure conducted within 24 hours prior to admission to your unit

Options
Yes
No

Definition for collection:

- specifies whether the admission has undergone in-hospital surgery or procedure within 24 hours prior to admission to your unit
- admission to your unit is the physical admission and recording of that admission to a bed in your unit
- surgery is undergoing all or part of a surgical procedure or anaesthesia for a surgical procedure in an operating theatre or an anaesthetic room; includes open surgery and laparoscopic surgery
- procedure is undergoing vascular and/or interventional radiology or endoscopic treatment either in an operating theatre, an anaesthetic room, imaging department or a specialist treatment area (includes endoscopy and catheter suites in the hospital)
- organ donation/retrieval is not considered surgery

Justification

Provides important information on surgery/procedure prior to admission to the critical care unit

Intubation interventions

Number of fields: Four

Core Module

Fields: Translaryngeal intubation at any time during unit stay
Tracheostomy at any time during unit stay

Daily Organ Support Module

Fields: Translaryngeal intubation
Tracheostomy

Options: All fields
Yes
No

Definition for collection:

Core Module

- fields each specify whether the admission received the specific type of intubation at any time during unit stay

Daily Organ Support Module

- a calendar day is any complete calendar day (00:00-23:59) or part thereof, e.g. a patient admitted on 1 January 2021 at 23:45 and discharged on 3 January 2021 at 00:10 would be recorded as having received three calendar days of care

- specifies the intubation intervention(s) the admission had in place on each calendar day whilst on your unit

Intubation interventions

- **Translaryngeal intubation** is having transoral or transnasal intubation of the airway through the larynx

- **Tracheostomy** is having a tracheal tube in place

Justification

Provide important information on intubation interventions in the critical care unit

Level of care received at discharge from your unit

Number of fields: One

Field: Level of care received at discharge from your unit

Options: Level 3
Level 2
Level 1
Level 0

Definition for collection:

- level of care refers to the type of care received by the admission immediately prior to discharge from your unit
- location of an admission does not determine level of care
- see Appendix: Levels of care for Level of care definitions

Justification

These fields are part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR). Level of care definitions are based on ICS Standards and Guidelines 2009

Levels of care

Number of fields: Five

Core Module

Fields: Level 3 days
Level 2 days
Level 1 days
Level 0 days

Units of measurement: Calendar days

Daily Organ Support Module

Field: Highest level of care received

Options: Level 3 care
Level 2 care
Level 1 care
Level 0 care

Definition for collection:

- a calendar day is any complete calendar day (00:00-23:59) or part thereof, e.g. a patient admitted on 1 January 2021 at 23:45 and discharged on 3 January 2021 at 00:10 would be recorded as having received three calendar days of care
- the highest level of care within a calendar day is recorded such that if an admission changes from level 2 care to level 3 care, or vice versa, during a calendar day, then the level of care recorded is level 3 e.g. a complete calendar day on which an admission receives 30 minutes of level 3 care and 23 hours, 30 minutes of level 2 care is recorded as one calendar day of level 3 care
- location of an admission does not determine level of care
- see Appendix: Levels of care for Level of care definitions

Core Module

- specify the total number of calendar days during which the admission received care at a specific level of care whilst on your unit
- record 1, 2, 3 etc for one, two, three etc calendar days; record 998 for 998 or more calendar days; record 999 for support occurring but number of days not known

Daily Organ Support Module

- Highest level of care received on each calendar day whilst admitted to your unit

Justification

These fields are part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR). Level of care definitions are based on ICS Standards and Guidelines 2009

Liver support

Number of fields: Two

Core Module

Field: Liver support days

Units of measurement: Calendar days

Daily Organ Support Module

Field: Liver support

Options: Yes
No

Definition for collection:

- a calendar day is any complete calendar day (00:00-23:59) or part thereof, e.g. a patient admitted on 1 January 2021 at 23:45 and discharged on 3 January 2021 at 00:10 would be recorded as having received three calendar days of care

Core Module

- specifies the number of calendar days during which the admission received any liver support whilst on your unit
- record 1, 2, 3 etc for one, two, three etc calendar days; record 998 for 998 or more calendar days; record 999 for support occurring but number of days not known

Daily Organ Support Module

- specifies the liver support the admission received on each calendar day whilst admitted to your unit

Liver support – indicated by the following:

- management of coagulopathy and/or management of portal hypertension (including liver purification and detoxification techniques) for either:
  - acute on chronic hepatocellular failure; or
  - primary acute hepatocellular failure whilst being considered for transplantation.

Justification

These fields are part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR). Level of care definitions are based on ICS Standards and Guidelines 2009

Lymphocyte count

Number of fields: Three

Fields: Lowest lymphocyte count
Highest lymphocyte count
or
Lymphocyte count missing

Units of measurement: $x10^9\ l^{-1}$

Definition for collection:

- lowest and highest lymphocyte count values measured and recorded in the first 24 hours in your unit
- the effects of steroids, inotropes and splenectomy are ignored
- if an admission stays less than 24 hours, then enter the lowest and highest lymphocyte count values measured and recorded while in your unit
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in near-patient testing/point-of-care testing laboratories with formal quality control programmes in operation
- if only one lymphocyte count value is measured and recorded, then this value is considered the lowest value
- if no lymphocyte count values are measured and recorded in the first 24 hours in your unit, then tick lymphocyte count missing

---

Justification

Provides important information on haematology

Lymphoma

Number of fields:	One
Field:	Lymphoma
Options:	No Yes

Definition for collection:

- admission has active lymphoma, documented by surgery, imaging or biopsy
- should be determined from the six months prior to admission to your unit
- documented prior to, or at, admission to your unit

Justification

Weighted in the ICNARC model and APACHE II/III scores

MRSA present

Number of fields: One

Field: MRSA present

Options: Admission MRSA
Unit-acquired MRSA
No MRSA
No samples taken

Definition for collection:

- **Admission MRSA** is presence of MRSA (methicillin resistant *Staphylococcus aureus*) in any sample taken for microbiological examination after admission to your hospital and either prior to admission, or in the first 48 hours following admission, to your unit
- **Unit-acquired MRSA** is presence of MRSA in any sample taken for microbiological examination after 48 hours following admission to your unit and while still in your unit
- it is recognised that this will underestimate the true rate of unit-acquired infections, i.e. by excluding those in samples in the 48 hours following discharge from your unit
- **No MRSA** is absence of MRSA in any sample taken for microbiological examination after admission to your hospital and either prior to admission to or during the stay in your unit
- “any sample” includes skin and/or nasal swabs or screens

Justification

Provides important information on unit-acquired infection

Myelogenous/lymphocytic leukaemia or multiple myeloma

Number of fields: One

Field: Myelogenous/lymphocytic leukaemia or multiple myeloma

Options: No
Yes

Definition for collection:

- admission has myelogenous leukaemia, acute lymphocytic leukaemia or multiple myeloma
- should be determined from the six months prior to admission to your unit
- documented prior to, or at, admission to your unit

Justification

Weighted in the ICNARC model and APACHE II/III scores

Neurological status

Number of fields: One

Field: Neurological status

Options: Assessed
Not assessed

Definition for collection:

- specifies whether or not neurological status was assessed

Justification

Acts as a filter field for further data entry

Neurological support

Number of fields: Two

Core Module

Field: Neurological support days

Units of measurement: Calendar days

Daily Organ Support Module

Field: Neurological support

Options: Yes
No

Definition for collection:

- a calendar day is any complete calendar day (00:00-23:59) or part thereof, e.g. a patient admitted on 1 January 2021 at 23:45 and discharged on 3 January 2021 at 00:10 would be recorded as having received three calendar days of care

Core Module

- specifies the number of calendar days during which the admission received any neurological support whilst on your unit

- record 1, 2, 3 etc for one, two, three etc calendar days; record 998 for 998 or more calendar days; record 999 for support occurring but number of days not known

Daily Organ Support Module

- specifies the neurological support the admission received on each calendar day whilst admitted to your unit

Neurological support – indicated by one or more of the following:

- central nervous system depression sufficient to prejudice the airway and protective reflexes, except central nervous system depression caused by sedation prescribed to facilitate mechanical ventilation; or, except poisoning (e.g. deliberate or accidental self-administered overdose, alcohol, drugs etc.);

- invasive neurological monitoring or treatment (e.g. ICP (intracranial pressure), jugular bulb sampling, external ventricular drain etc.);

- admissions receiving continuous intravenous medication to control seizures and/or for continuous cerebral monitoring; and

- admissions receiving therapeutic hypothermia using cooling protocols or devices.

Justification

These fields are part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR). Level of care definitions are based on ICS Standards and Guidelines 2009

NHS number

Number of fields: One

Field: NHS number

Definition for collection:

- unique number assigned by the NHS as a numeric ten-digit code to each NHS patient

---

Justification

Section 251 support for the collection and use of patient identifiable data has been approved for the Case Mix Programme by the Confidentiality Advisory Group (CAG) within the Health Research Authority (HRA) (previously National Information Governance Board).
The approval number for the CMP is PIAG 2-10(f)/2005

This field is part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR)

Origin of first unit-acquired bloodstream infection

Number of fields: One

Field: Origin of first unit-acquired bloodstream infection

Options:
Central venous catheter
Peripheral venous catheter
Pulmonary
Urinary catheter
Urinary tract
Digestive tract
Surgical site
Skin and soft tissue (not surgical site)
Other *(please specify in text box)*
Unknown

Definition for collection:

- Origin is the first portal of entry into the body by the main organism causing the first unit-acquired bloodstream infection (UABSI)
- **Other** specifies 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). Please specify other origin in text box
- **Unknown** specifies that the origin of first confirmed UABSI could not be identified
- where more than one potential origin of first UABSI is identified, use clinical judgement to determine the most likely origin

---

Justification

Provides important information on unit-acquired infection

Origin of first unit-acquired non-bloodstream infection

Number of fields: One

Field: Origin of first unit-acquired non-bloodstream infection

Options:
Central venous insertion site
Peripheral venous insertion site
Pulmonary
Urinary catheter
Urinary tract
Digestive tract
Surgical site
Skin and soft tissue (not surgical site)
Other *(please specify in text box)*
Unknown

Definition for collection:

- Origin is the first portal of entry into the body by the main organism causing the first unit-acquired non-bloodstream infection
- **Other** specifies another origin, not listed, was the first portal of entry by the main organism causing the first unit-acquired non-bloodstream infection (e.g. musculoskeletal, central nervous system, cardiovascular etc). Please specify other origin in text box
- **Unknown** specifies that the origin of first confirmed unit-acquired non-bloodstream infection could not be identified
- where more than one potential origin of first unit-acquired non-bloodstream infection is identified, use clinical judgement to determine the most likely origin

---

Justification

Provides important information on unit-acquired infection

Oxygenation and pH

Number of fields: Six

Fields: PaO_2 from arterial blood gas with lowest PaO_2
Associated FIO_2
Associated PaCO2
Associated pH
Associated intubation status
or
Arterial blood gases missing

Units of measurement:

PaO_2	kPa
FIO_2	fraction
$PaCO_2$	kPa
pH	pH

Options: Associated intubation status; Arterial blood gases missing
Yes
No

Definition for collection:

- all five values from the same arterial blood gas with the lowest PaO_2 measured and recorded in the first 24 hours in your unit
- only arterial blood gas measurements are acceptable
- intubated is a laryngeal mask, an endotracheal, endobronchial or tracheostomy tube in place
- if an admission stays less than 24 hours, then enter the five values from the same arterial blood gas with the lowest PaO_2 measured and recorded while in your unit
- if only one set of arterial blood gas values is measured and recorded, then this set of values is considered the arterial blood gas with the lowest PaO_2 and associated values
- if two or more arterial blood gas values provide the lowest PaO_2 value, enter the lowest PaO_2 value with the highest associated FIO_2 value
- if no arterial blood gas values are measured and recorded, then record arterial blood gases missing
- see Appendix: Table of FIO_2 approximations for non-intubated admissions receiving oxygen treatment

---

Justification

Weighted in the ICNARC model and APACHE II/III scores. Provides important information for identification of sepsis (Sepsis-3/Sequential Organ Failure Assessment (SOFA))

Planned admission to your unit

Number of data items: One

Field: Planned admission to your unit

Options: Yes
No

Definition for collection:

- For admissions either having had a major surgical procedure, or surgery for a high-risk medical condition associated with any level of surgery (including pre-surgical optimisation prior to elective surgery and admissions for monitoring of pain control):
    - planned is a pre-arranged admission where acceptance by your unit must have occurred prior to start of surgery – specifically, the induction of anaesthesia
- For all other admissions:
    - planned is a pre-arranged admission to your unit

Justification

Provides important data for activity and future planning

This field is part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society. These data are required in England to provide standardised, core data on critical care episodes and interventions. The data support local, regional and national analysis, commissioning and Payment by Results (PbR)

Platelet count

Number of fields: Two

Fields: Lowest platelet count
or
Platelet count missing

Units of measurement: $x10^9\ l^{-1}$

Definition for collection:

- lowest platelet count measured and recorded in the first 24 hours in your unit
- the effects of splenectomy are ignored
- if an admission stays less than 24 hours, then enter the lowest platelet count value measured and recorded while in your unit
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in the near-patient testing/point of care testing laboratories with formal quality control programmes in operation
- if only one platelet count value is measured and recorded, then this value is considered the lowest value
- if no platelet count values are measured and recorded in the first 24 hours in your unit, then tick platelet count missing

---

Justification

Weighted in the ICNARC model. Provides important information for identification of sepsis (Sepsis-3/Sequential Organ Failure Assessment (SOFA))

Portal hypertension

Number of fields: One

Field: Portal hypertension (PH_V4)

Options: No portal hypertension
Portal hypertension – no variceal bleed
Portal hypertension – with variceal bleed

Definition for collection:

- **Portal hypertension – no variceal bleed** is portal hypertension, but with no variceal bleeding
- **Portal hypertension – with variceal bleed** is portal hypertension with episodes of variceal bleeding documented in the last six months
- evidence of portal hypertension is either:
    - the presence of oesophageal or gastric varices demonstrated by surgery, imaging or endoscopy;
    - an increase in portal venous pressure gradient; or
    - flow reversal in portal and/or splenic vein.
- do not include gastrointestinal bleeding without evidence of portal hypertension
- should be determined from the six months prior to admission to your unit
- documented prior to, or at, admission to your unit

Justification

Weighted in the ICNARC model and APACHE II/III scores

Postcode

Number of fields: Three

Fields: Postcode
Country
Admission does not have postcode

Definition for collection:

- normal residential postcode for this admission to your unit
- for visitors to area, use normal residential postcode for admission's permanent place of residence
- if admission is not a resident of the United Kingdom of Great Britain and Northern Ireland, record their country of origin in the **Country** field (select country from the list)
- if postcode is unobtainable, tick **Admission does not have postcode**
- if outcode (first half of postcode) is obtainable, record this

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Justification

Provides important information on source of admission

This field is part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR)

Previous transplant

Number of fields: One

Field: Previous transplant

Options: No
Yes

Definition for collection:

- admission has previously undergone an organ transplant
- includes allograft of one or more of bone marrow (stem cell), heart or heart-lung, islet cell, kidney, pancreas or kidney/pancreas, liver, lung and small bowel
- allografts only; do not include autografts
- cornea transplant does not fulfil the definition of previous transplant
- documented prior to, or at, admission to your unit

Justification

Provides important information on medical history and for interpreting outcome

Primary reason for admission to your unit

Number of fields: Two

Fields: Primary reason for admission to your unit
Primary reason for admission to your unit - incomplete code text box

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Definition for collection:

- the **Primary reason for admission to your unit** as assessed and recorded at admission to and during the first 24 hours in your unit
- deemed to be the most important underlying condition or reason for admission to your unit and should describe what is happening, or could possibly happen, to this admission that precluded management on the hospital ward
- there is no point describing a syndrome that is characterised by a series of physiological changes as this will be apparent, so septic shock, septicaemia etc. should be secondary to an underlying condition coded as primary
- codes are generated by the ICNARC Coding Method (ICM)
- where the condition required to be coded is not available, code the condition as far as you can and then enter the name of the condition in the "**Primary reason for admission to your unit - incomplete code text box**" (periodically, these text data are used to update and improve the ICM)
    - **no identifiers (patient, nurse, doctor, unit, hospital) should be included in text data entered into this field**
- see the ICNARC website for an ICM builder and the ICM Guide, which provides further advice on using the ICM

Justification

Weighted in the ICNARC model and APACHE II/III scores

Primary specialty treated under prior to admission to your unit

Number of fields: One

Field: Primary speciality treated under prior to admission to your unit

Definition for collection:

- primary specialty the admission was treated under at the beginning of the hospital episode that contains the critical care period
- if admission to your unit corresponds to the start of a new episode (i.e. the primary responsibility for the admission passes to a consultant in your unit) then record the primary specialty the admission was treated under for the last (i.e. just prior to admission to your unit) hospital episode
- the primary specialty should be the particular specialty that the admission was treated under and not necessarily the main speciality of the consultant, e.g. an admission having colorectal surgery under a general surgeon would be coded as colorectal surgery and not general surgery
- primary specialty is recorded using NHS Treatment Function Codes
    - see National Codes table in NHS Data Dictionary: https://datadictionary.nhs.uk/attributes/treatment_function_code.html

Justification

To quantify demand on critical care services by different hospital specialties

Prior to admission to your hospital

Number of fields:	One
Field:	Prior to admission to your hospital
Options:	Not in acute hospital Other acute hospital

Definition for collection:

- **Not in acute hospital** is admitted to your hospital (the hospital housing your unit) from home, the community, or a non-acute healthcare facility
- **Other acute hospital** is admitted to another acute hospital prior to admission to the hospital housing your unit, and transferred to your hospital from this other acute hospital
    - other Acute hospital, one that does not house your critical care unit, is another hospital (can be in the same or a different NHS Trust) that provides a range of acute hospital services to diagnose, treat and care for seriously ill or injured patients; some acute hospitals may provide only specialist services while others will provide general services

Justification

Provides important information on source of admission

Procalcitonin

Number of fields: Two

Fields: Highest procalcitonin
or
Procalcitonin missing

Units of measurement: µg l^{-1}

Definition for collection:

- highest procalcitonin value measured and recorded in the first 24 hours in your unit
- if an admission stays less than 24 hours, then enter the highest procalcitonin value measured and recorded while on your unit
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in near-patient testing/point of care testing laboratories with formal quality control programmes in operation
- if only one procalcitonin value is measured and recorded then this value is considered the highest value
- if no procalcitonin values are measured and recorded in the first 24 hours in your unit, then tick procalcitonin missing

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Justification

Provides important biomarker information

Pupil reactivity

Number of fields:	Three
Field:	Pupil reactivity (left eye) Pupil reactivity (right eye) or Pupil reactivity missing
Options:	Reactive Unreactive Unable to assess

Definition for collection:

- most abnormal pupil reactivity, for left and right eye, assessed and recorded as a pair in the first 24 hours in your unit
- **Reactive** is pupillary contraction to strong direct light
- **Unreactive** is no pupillary contraction to strong direct light
- **Unable to assess** is where pupils cannot be inspected (e.g. eyes are closed due to facial injury or swelling, etc)
- most abnormal is rated as both unreactive>one (left or right) unreactive>both reactive
- chronically altered pupils from previous disease should be recorded as unable to assess
- only pupil reactivity assessed when an admission is free from iatrogenic drug effects (e.g. drops given for dilation) are valid
- if an admission stays less than 24 hours, then enter the most abnormal pupil reactivity assessed and recorded while in your unit
- if no pupil reactivity values are assessed and recorded in the first 24 hours in your unit, then tick pupil reactivity missing

Justification

Evidence suggests that pupil reactivity is associated with mortality

Radiotherapy

Number of fields: One

Field: Radiotherapy

Options: No
Yes

Definition for collection:

- admission has received externally administered radiotherapy
- excludes all of the following: radiotherapy for non-invasive skin tumours; enteral or parenteral radioisotope therapy; radioactive implants; radiotherapy for prevention of heterotopic bone formation
- receipt should be determined from the six months prior to admission to your unit
- documented prior to, or at, admission to your unit

Justification

Weighted in the ICNARC model and APACHE II/III scores

Reason for transfer from your unit

Number of fields: One

Field: Reason for transfer from your unit

Options: More-specialised care
Comparable care
Step-up care
Step-down care
Repatriation

Definition for collection:

- the reason the admission was transferred from your unit to another critical care unit
- **More-specialised care** is transfer from your unit for specialist critical care not available in your unit, either age appropriate, e.g. paediatric critical care, or specialty appropriate, e.g. neurocritical care; includes transfer from your unit for skills/interventions not present in your unit
- **Comparable care** is transfer from your unit for similar care as provided in your unit (not for specialist care)
- **Step-up care** is transfer from your unit for a higher level of care, e.g. transfer out from an HDU to an ICU to step-up from Level 2 care to Level 3 care
- **Step-down care** is transfer from your unit for a step-down in level of care, e.g. transfer out from an ICU to an HDU to step-down from Level 3 care to Level 2 care
- **Repatriation** is returning an admission to their original unit, hospital or area

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Justification

Provides important information on critical care transfers

This field is part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR)

Reason for transfer to your unit

Number of fields: One

Field: Reason for transfer to your unit

Options: More-specialised care
Comparable care
Step-up care
Step-down care
Repatriation

Definition for collection:

- the reason the admission was transferred to your unit from another critical care unit
- **More-specialised care** is transfer to your unit for specialist critical care not available in the original unit, either age appropriate, e.g. paediatric critical care, or specialty appropriate, e.g. neurocritical care; includes transfer to your unit for skills/interventions not present in original unit
- **Comparable care** is transfer to your unit for similar care as provided in your unit (not for specialist care)
- **Step-up care** is transfer to your unit for a higher level of care, e.g. transfer in from an HDU to an ICU to step-up from Level 2 care to Level 3 care
- **Step-down care** is transfer to your unit for a step-down in level of care, e.g. transfer from an ICU to an HDU to step-down from Level 3 care to Level 2 care
- **Repatriation** is returning an admission to their original unit, hospital or area

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Justification

Provides important information on critical care transfers

Renal support

Number of fields: Two

Core Module

Field: Renal support days

Units of measurement: Calendar days

Daily Organ Support Module

Field: Renal support

Options: Yes
No

Definition for collection:

- a calendar day is any complete calendar day (00:00-23:59) or part thereof, e.g. a patient admitted on 1 January 2021 at 23:45 and discharged on 3 January 2021 at 00:10 would be recorded as having received three calendar days of care

Core Module

- specifies the number of calendar days during which the admission received any renal support whilst on your unit

- record 1, 2, 3 etc for one, two, three etc calendar days; record 998 for 998 or more calendar days; record 999 for support occurring but number of days not known

Daily Organ Support Module

- specifies the renal support the admission received on each calendar day whilst admitted to your unit

Renal support - indicated by the following:

- acute renal replacement therapy (e.g. haemodialysis, haemofiltration etc.)

- renal replacement therapy for chronic renal failure where other acute organ support is received

The last day of renal support is the date and time of completion of final renal replacement treatment

Justification

These fields are part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR). Level of care definitions are based on ICS Standards and Guidelines 2009

Repatriated to your unit from other acute hospital

Number of fields:	One
Field:	Repatriated to your unit from other acute hospital
Options:	Yes No

Definition for collection:

- specifies whether the admission was a planned admission transferred to your unit from another location because the admission either originated from your unit or your hospital or your area

Justification

Provides important information on source of admission

Residence post-discharge from acute hospital

Number of fields: One

Field: Residence post-discharge from acute hospital

Options: Assisted living
Nursing home
Health-related institution
Hospice or equivalent
Home

Definition for collection:

- admission's permanent/semi-permanent place of residence post-discharge from acute hospital
- **Assisted Living** is a residence that provides help with activities of daily living including basic health services, recreational and social activities but not skilled nursing care
- **Nursing home** or equivalent is an establishment providing 24/7 nursing or personal care services by licensed health professionals to the older or infirm or chronically ill population
- **Health-related institution** includes psychiatric hospital, community hospital, rehabilitation facility, institution for chronically sick etc.
- **Hospice or equivalent** is an establishment providing medical care and support services to terminally ill persons
- **Home** includes owner occupied and rented property, sheltered housing, safe housing, warden-controlled housing, residential care communities for independent living/senior living, living with relatives/friends, mobile homes, houseboats, bed and breakfast (if on a semi-permanent basis), along with residential places of work (such as barracks, oil rig, boarding school, university etc.) and non-health related institutions (such as prison, correctional facility, children's home etc.)

Justification

Provides important information for interpreting outcome

Residence prior to admission to acute hospital

Number of fields: One

Field: Residence prior to admission to acute hospital

Options: Home
Assisted living
Nursing home or equivalent
Health-related institution
Hospice or equivalent
Homeless

Definition for collection:

- admission's permanent/semi-permanent place of residence prior to admission to acute hospital
- for transient locations e.g. on holiday, staying with relatives/friends, in a hotel (medical tourist), in the pub, on the tennis court, in a car park, outside etc. use admission's permanent/semi-permanent place of residence
- **Home** includes owner occupied and rented property, sheltered housing, safe housing, warden-controlled housing, residential care communities for independent living/senior living, living with relatives/friends, mobile homes, houseboats, bed and breakfast (if on a semi-permanent basis), along with residential places of work (such as barracks, oil rig, boarding school, university etc.) and non-health related institutions (such as prison, correctional facility, children's home etc.)
- **Assisted Living** is a residence that provides help with activities of daily living including basic health services, recreational and social activities but not skilled nursing care
- **Nursing home or equivalent** is an establishment providing 24/7 nursing or personal care services by licensed health professionals to the older or infirm or chronically ill population
- **Health-related institution** includes psychiatric hospital, community hospital, rehabilitation facility, institution for chronically sick etc.
- **Hospice or equivalent** is an establishment providing medical care and support services to terminally ill persons
- **Homeless** is no fixed address/abode or temporary abode including living in hostels or bed and breakfast on a temporary basis (if not on holiday), etc.

Justification

Provides important information on source of admission

Respiratory interventions

Number of fields: Twelve

Core Module

Fields:
V-V ECMO at any time during unit stay
V-A ECMO at any time during unit stay
$ECCO_2R$ at any time during unit stay
Invasive ventilation at any time during unit stay
Non-invasive ventilation at any time during unit stay
Prone position at any time during unit stay

Options: All fields
Yes
No

Daily Organ Support Module

Fields:
V-V ECMO
V-A ECMO
$ECCO_2R$
Invasive ventilation
Non-invasive ventilation
Prone position

Definition for collection:

Core Module

- fields each specify whether the admission received the specific respiratory intervention at any time during unit stay

Daily Organ Support Module

- a calendar day is any complete calendar day (00:00-23:59) or part thereof, e.g. a patient admitted on 1 January 2021 at 23:45 and discharged on 3 January 2021 at 00:10 would be recorded as having received three calendar days of care

- each respiratory intervention should be ticked for each calendar day received whilst on your unit

Respiratory interventions

- Extracorporeal Membrane Oxygenation (ECMO) is the provision of oxygen and carbon dioxide exchange through the use of an extracorporeal circuit consisting minimally of a blood pump, artificial lung, and vascular access cannulae, using blood flows sufficient to support oxygenation and concomitantly enhance carbon dioxide removal

- **V-V ECMO** (Veno-Venous Extracorporeal Membrane Oxygenation) is extracorporeal circulation primarily for respiratory support. The extracorporeal circuit drains blood from

the venous system and reinfuses into the venous system. V-V ECMO operates in series with the heart and lungs and does not provide bypass of these organs

- **V-A ECMO** (Veno-Arterial Extracorporeal Membrane Oxygenation) is extracorporeal circulation for cardiac or circulatory support. The extracorporeal circuit drains blood from the venous system and returns into the systemic arterial system. Without qualification, V-A ECMO refers to support that returns blood to the systemic arterial system, operating in parallel with and providing partial, or complete, bypass of the heart and lungs

- **ECCO$_2$R** (extracorporeal carbon dioxide removal) is the provision of solely carbon dioxide exchange through the use of an extracorporeal circuit including an artificial lung

    - Includes both Arteriovenous carbon dioxide removal (A-V CO_2R) and Veno-venous extracorporeal carbon dioxide removal (V-V CO_2R)

- **Invasive ventilation** is invasive ventilatory support applied via a trans-laryngeal tube or applied via a tracheostomy

    - includes BPAP* (bilevel positive airway pressure) applied via a trans-laryngeal tracheal tube or applied via a tracheostomy

    - includes CPAP (continuous positive airway pressure) via a trans-laryngeal tracheal tube

    - does <u>not</u> include mask/hood CPAP or mask/hood BPAP* or CPAP via a tracheal tube

- **Non-invasive ventilation** is non-invasive ventilatory support; includes:

    - mask/hood CPAP or mask/hood BPAP*;

    - CPAP via a tracheostomy; and

    - high-flow nasal cannula.

- **Prone position** is placed in prone position or clinically indicated self-proning

    - includes lateral proning

*BPAP is often also denoted BiPAP or BIPAP

Justification

Provide important information on respiratory interventions in the critical care unit

Respiratory rate

Number of fields: Four

Fields: Lowest non-ventilated respiratory rate
Highest non-ventilated respiratory rate

Lowest ventilated respiratory rate
Highest ventilated respiratory rate

Units of measurement: breaths min^{-1}

Definition for collection:

- lowest and highest non-ventilated respiratory rates and/or lowest and highest ventilated respiratory rates measured and recorded in the first 24 hours in your unit
- a ventilated respiratory rate is where all or some of the breaths or a portion of the breaths (pressure support) are delivered by a mechanical device. Ventilation can be simply defined as a treatment where some or all of the energy required to increase lung volume during inspiration is supplied by a mechanical device
- for admissions who are ventilated, the respiratory rate should account for both ventilated and spontaneous breaths in a minute
- if an admission stays less than 24 hours, then enter the lowest and highest non-ventilated respiratory rates and/or lowest and highest ventilated respiratory rates measured and recorded while in your unit
- respiratory rates should not be recorded for any admissions during periods of iatrogenic disturbance, e.g. physiotherapy, turning, periods of crying etc.
- hand ventilation (by a member of your unit team) and high frequency and jet ventilators, negative pressure ventilators and BPAP* (bilevel positive airway pressure) are considered to be ventilated
- CPAP (continuous positive airway pressure), ECMO (extracorporeal membrane oxygenation), IVOX (intravenacaval oxygenator/carbon dioxide removal device) and HFNO (high-flow nasal oxygen alone are considered not ventilated
- if only one non-ventilated or one ventilated respiratory rate is measured and recorded, then this value is considered the lowest value
- where non-ventilated respiratory rates are not measurable (apnoea), the value zero should be recorded as the lowest non-ventilated respiratory rate

*BPAP is often also denoted BiPAP or BIPAP

Justification

Weighted in the ICNARC model and APACHE II/III scores

Respiratory support days

Number of fields: Three

Core Module

Fields: Basic respiratory support days
Advanced respiratory support days

Units of measurement: Calendar days

Daily Organ Support Module

Field: Respiratory support

Options: Advanced
Basic
No

Definition for collection:

- a calendar day is any complete calendar day (00:00-23:59) or part thereof, e.g. a patient admitted on 1 January 2021 at 23:45 and discharged on 3 January 2021 at 00:10 would be recorded as having received three calendar days of care

Core Module

- specifies the number of calendar days during which the admission received any basic or advanced respiratory support whilst on your unit

- record 1, 2, 3 etc for one, two, three etc calendar days; record 998 for 998 or more calendar days; record 999 for support occurring but number of days not known

Daily Organ Support Module

- specifies the respiratory support the admission received on each calendar day whilst admitted to your unit

Advanced Respiratory support - indicated by one or more of the following (see diagram)

- invasive mechanical ventilatory support applied via a trans-laryngeal tube or applied via a tracheostomy

- BPAP* (bilevel positive airway pressure) applied via a trans-laryngeal tracheal tube or applied via a tracheostomy

- CPAP (continuous positive airway pressure) via a trans-laryngeal tracheal tube

- extracorporeal respiratory support

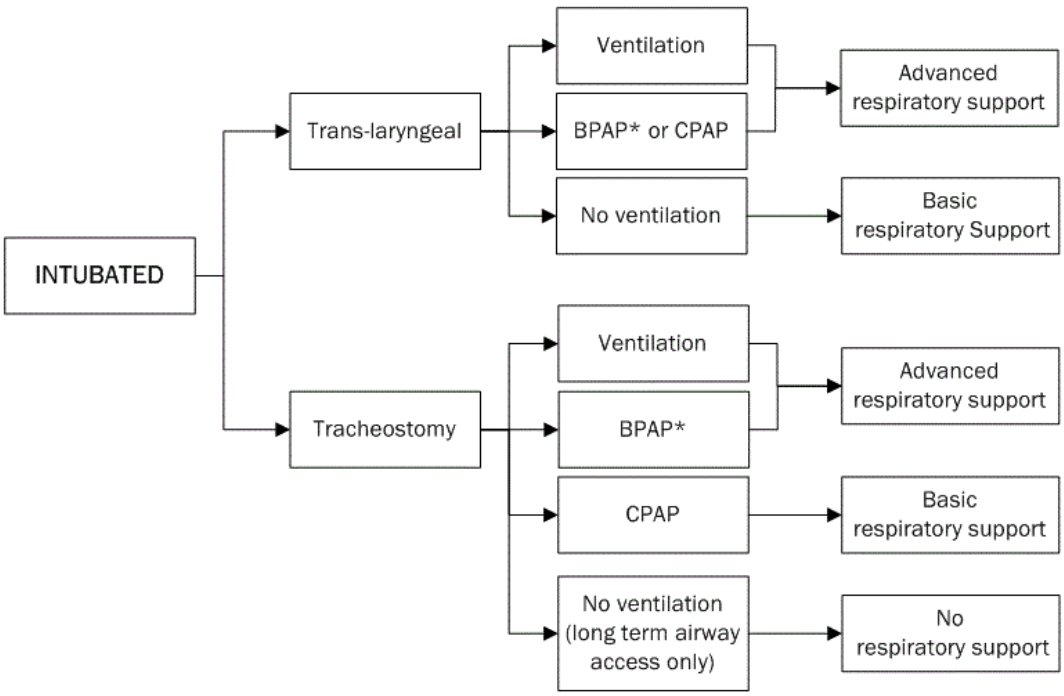
- note: mask/hood CPAP or mask/hood BPAP* is <u>not</u> considered advanced respiratory support

Basic Respiratory - indicated by one or more of the following (see diagram)

- receipt of more than 50% oxygen delivered by a face mask (except those receiving short-term increases in FiO2, e.g. during transfer, for physiotherapy, etc.)
- close observation due to the potential for acute deterioration to the point of requiring advanced respiratory monitoring and support e.g. severely compromised airway, deteriorating respiratory muscle function, etc.
- physiotherapy or suction to clear secretions, at least two hourly, either via a tracheostomy, a minitracheostomy or in the absence of an artificial airway
- recently (i.e. within 24 hours) extubated after a period (i.e. more than 24 hours) of mechanical ventilation via an endotracheal tube
- mask/hood CPAP or mask/hood BPAP* or other non-invasive ventilation (e.g. high-flow nasal canula)
- CPAP via a tracheostomy
- intubated to protect the airway but receiving no ventilatory support and otherwise stable

Note: If advanced and basic respiratory monitoring and support occur simultaneously, then only advanced respiratory monitoring and support should be recorded.

The following diagram may aid categorisation to advanced or basic respiratory support:



*BPAP is often also denoted BiPAP or BIPAP

Justification

These fields are part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (Version 8.0, ISN: Amd 81/2010). These data support local, regional and national analysis, commissioning and Payment by Results (PbR). Level of care definitions are based on ICS Standards and Guidelines 2009

Secondary reason for admission to your unit

Number of fields: Three

Field: Secondary reason for admission to your unit
Secondary reason for admission to your unit - incomplete code text box
No secondary reason for admission to your unit

Definition for collection:

- the **Secondary reason for admission to your unit** as assessed and recorded at admission to and during the first 24 hours in your unit
- should describe, in addition to the primary reason for admission to your unit, what is happening, or could possibly happen, to this admission that precluded management on the hospital ward
- codes are generated by the ICNARC Coding Method (ICM)
- where the condition required to be coded is not available, code the condition as far as you can and then enter the name of the condition in the "**Secondary reason for admission to your unit - incomplete code text box**" (periodically, these text data are used to update and improve the ICM)
    - **no identifiers (patient, nurse, doctor, unit, hospital) should be included in text data entered into this field**
- where the primary reason for admission to your unit adequately describes the full reason for admission to your unit, leave the secondary reason for admission to your unit blank, and tick the "**No secondary reason for admission to your unit**" tick-box
- See the ICNARC website for an ICM builder and the ICM Guide, which provides further advice on using the ICM

Justification

Provides important additional information to the Primary reason for admission to your unit

Sector of other hospital (in)

Number of fields: One

Field: Sector of other hospital (in)

Options: NHS – within your Trust
NHS – outside your Trust
Non-NHS, UK
Non-UK

Definition for collection:

- specifies the hospital sector of the other hospital from which the admission came prior to being admitted to your hospital/unit, either directly or indirectly
- **NHS – within your Trust** is a hospital wholly or mostly owned and operated by the NHS and within the same NHS Trust as your hospital
- **NHS – outside your Trust** is a hospital wholly or mostly owned and operated by the NHS and within a different NHS Trust to your hospital
- **Non-NHS, UK** is another hospital wholly or mostly owned and operated by an organisation other than the NHS based in the United Kingdom (UK)
- **Non-UK** is another hospital which is not situated in the United Kingdom (UK)

Justification

Provides important information on source of admission

This field is part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR)

Sector of other hospital (out)

Number of fields: One

Field: Sector of other hospital (out)

Options: NHS – within your Trust
NHS – outside your Trust
Non-NHS, UK
Non-UK

Definition for collection:

- specifies the hospital sector of the other hospital to which the admission was discharged following discharge from your unit/hospital, either directly or indirectly
- **NHS – within your Trust** is a hospital wholly or mostly owned and operated by the NHS and within the same NHS Trust as your hospital
- **NHS – outside your Trust** is a hospital wholly or mostly owned and operated by the NHS and within a different NHS Trust to your hospital
- **Non-NHS, UK** is another hospital wholly or mostly owned and operated by an organisation other than the NHS based in the United Kingdom (UK)
- **Non-UK** is another hospital which is not situated in the United Kingdom (UK)

Justification

Provides important information on for interpreting outcome

This field is part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR)

Sedated or paralysed and sedated for whole of first 24 hours in your unit

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Number of fields: One

Field: Sedated or paralysed and sedated for whole of first 24 hours in your unit

Options: Sedated for whole of first 24 hours
Paralysed and sedated for whole of first 24 hours
Sedated for some of first 24 hours
Paralysed and sedated for some of first 24 hours
Never sedated or paralysed at any time in first 24 hours

Definition for collection:

- specifies whether admission has been sedated and/or paralysed in the first 24 hours in your unit
- if an admission stays less than 24 hours, then base assessment on the period while in your unit
- sedation is receiving continuous or intermittent doses of agents to produce and maintain a continuous decreased level of consciousness – the latter includes patients allowed to lighten temporarily to assess for neurological readiness to extubate (sedation holds/vacations)
- self-sedation due to deliberate or accidental overdose/poisoning is <u>not</u> considered to be sedated and neurological status as seen, should be assessed
- paralysis is receiving paralysis or neuromuscular blocking agents to produce and maintain continuous muscle paralysis
- if an admission is, in clinical opinion, never free from the effects of sedatives/paralysing agents, then they are considered sedated or paralysed and sedated for the whole of the first 24 hours
- the determination as to whether an admission is free from the effects of sedative and/or paralysing or neuromuscular blocking agents is left to clinical judgement, as this is the only realistic standardisation for recording these data at this time

---

Justification

Weighted in the ICNARC model

Self-discharge

Number of fields: One

Fields: Self-discharge

Options: Yes
No

Definition for collection:

- self-discharge is a discharge precipitated by the admission against medical advice

---

Justification

Provides important data on discharge from critical care and hospital

Serum albumin

Number of fields: Three

Fields: Lowest serum albumin
Highest serum albumin
or
Serum albumin missing

Units of measurement: g l^{-1}

Definition for collection:

- lowest and highest serum albumin values measured and recorded in the first 24 hours in your unit
- if an admission stays less than 24 hours, then enter the lowest and highest serum albumin values measured and recorded while in your unit
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in near-patient testing/point-of-care testing laboratories with formal quality control programmes in operation
- the effect of albumin administration is ignored
- if only one serum albumin value is measured and recorded, then this value is considered the lowest value
- if no serum albumin values are measured and recorded in the first 24 hours in your unit, then tick serum albumin missing

---

Justification

Weighted in APACHE III score

Serum bicarbonate

Number of fields: Three

Fields: Lowest serum bicarbonate
Highest serum bicarbonate
or
Serum bicarbonate missing

Units of measurement: mmol l^{-1}

Definition for collection:

- lowest and highest serum bicarbonate values measured and recorded in the first 24 hours in your unit
- if an admission stays less than 24 hours, then enter the lowest and highest serum bicarbonate values measured and recorded while in your unit
- serum bicarbonate values must be measured values from a separate biochemical process on venous blood, and not those estimated by the blood gas analyser
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in near-patient testing/point of care testing laboratories with formal quality control programmes in operation
- if only one serum bicarbonate value is measured and recorded, then this value is considered the lowest value
- if no serum bicarbonate values are measured and recorded in the first 24 hours in your unit, then tick serum bicarbonate missing

---

Justification

Weighted in the APACHE II/III scores

Serum creatinine

Number of fields: Three

Fields: Lowest serum creatinine
Highest serum creatinine
or
Serum creatinine missing

Units of measurement: µmol l^{-1}

Definition for collection:

- lowest and highest serum creatinine values measured and recorded in the first 24 hours in your unit
- if an admission stays less than 24 hours, then enter the lowest and highest serum creatinine values measured and recorded while in your unit
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in near-patient testing/point-of-care testing laboratories with formal quality control programmes in operation
- serum creatinine values can be taken from the blood gas analyser
- if only one serum creatinine value is measured and recorded, then this value is considered the lowest value
- if no serum creatinine values are measured and recorded in the first 24 hours in your unit, then tick serum creatinine missing

---

Justification

Weighted in the ICNARC model and APACHE II/III scores. Provides important information for identification of sepsis (Sepsis-3/Sequential Organ Failure Assessment (SOFA))

Serum glucose

Number of fields: Three

Fields: Lowest serum glucose
Highest serum glucose
or
Serum glucose missing

Units of measurement: mmol l^{-1}

Definition for collection:

- lowest and highest serum glucose values measured and recorded in the first 24 hours in your unit
- if an admission stays less than 24 hours, then enter the lowest and highest serum glucose values measured and recorded while in your unit
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in the near-patient testing/point of care testing laboratories with formal quality control programmes in operation
- serum glucose values can be taken from the blood gas analyser
- estimations based on reflectance meters are included if formal quality control programmes are in operation; estimations based on the observed colour of BM stix are excluded
- if only one serum glucose value is measured and recorded, then this value is considered the lowest value
- if no serum glucose values are measured and recorded in the first 24 hours in your unit, then tick serum glucose missing

---

Justification

Weighted in the APACHE III score

Serum potassium

Number of fields: Three

Fields: Lowest serum potassium
Highest serum potassium
or
Serum potassium missing

Units of measurement: mmol l^{-1}

Definition for collection:

- lowest and highest serum potassium values measured and recorded in the first 24 hours in your unit
- if an admission stays less than 24 hours, then enter the lowest and highest serum potassium values measured and recorded while in your unit
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in near-patient testing/point-of-care testing laboratories with formal quality control programmes in operation
- serum potassium values can be taken from the blood gas analyser
- if only one serum potassium value is measured and recorded, then this value is considered the lowest value
- if no serum potassium values are measured and recorded in the first 24 hours in your unit, then tick serum potassium missing

---

Justification

Weighted in the APACHE II/III scores

Serum sodium

Number of fields: Three

Fields: Lowest serum sodium
Highest serum sodium
or
Serum sodium missing

Units of measurement: mmol l^{-1}

Definition for collection:

- lowest and highest serum sodium values measured and recorded in the first 24 hours in your unit
- if an admission stays less than 24 hours, then enter the lowest and highest serum sodium values measured and recorded while in your unit
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in near-patient testing/point-of-care testing laboratories with formal quality control programmes in operation
- serum sodium values can be taken from the blood gas analyser
- if only one serum sodium value is measured and recorded, then this value is considered the lowest value
- if no serum sodium values are measured and recorded in the first 24 hours in your unit, then tick serum sodium missing

---

Justification

Weighted in the ICNARC model and APACHE II/III scores

Serum urea

Number of fields: Two

Fields: Highest serum urea
or
Serum urea missing

Units of measurement: mmol l^{-1}

Definition for collection:

- highest serum urea value measured and recorded in the first 24 hours in your unit
- the effect of artificial reduction of serum urea is ignored
- if an admission stays less than 24 hours, then enter the highest serum urea value measured and recorded while in your unit
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in near-patient testing/point-of-care testing laboratories with formal quality control programmes in operation
- serum urea values can be taken from the blood gas analyser
- if only one serum urea value is measured and recorded then this value is considered the highest value
- if no serum urea values are measured and recorded in the first 24 hours in your unit, then record serum urea missing

---

Justification

Weighted in the ICNARC model and APACHE III score

Sex

Number of fields:	One
Field:	Sex
Options:	Female Male

Definition for collection:

- genotypical (sex they were born as…) sex of the admission

Justification

Weighted in the ICNARC model

Solid organ or tissue donor

Number of fields: One

Field: Solid organ or tissue donor

Options: Donor after brainstem death
Donor after cardiac death
Tissue donor only
No solid organs or tissues donated

Definition for collection:

- specifies whether admission went to surgery for organ donation as either a donor after brainstem death or donor after cardiac death or a tissue donor
- the fact that the admission went to surgery for organ or tissue donation must be documented
- **Donor after brainstem death** is a donor who has been certified dead following brainstem death tests (a ventilator allows the heart and circulation to continue until the organs are removed for the purposes of transplantation)
- **Donor after cardiac death** is a donor whose death is certified and the organs are removed for the purposes of transplantation after cardiac death (asystolic)
- solid organ includes heart, kidney(s), liver, lungs(s), pancreas, small bowel
- **Tissue donor only** is a tissue donor whose death is certified and the tissues are removed after cardiac death (asystolic)
- tissue includes heart valves, skin, cornea, bone, dura and organ(s)/tissue(s) for research
- an admission who is both a solid organ donor and a tissue donor is coded as a donor after brainstem death or donor after cardiac death (as appropriate)

Justification

Provides important information on organ/tissue donation

This field is part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR)

Solid tumour

Number of fields: One

Field: Solid tumour

Options: No solid tumour
Solid tumour – non-metastatic
Solid tumour – metastatic

Definition for collection:

- **Solid tumour – non-metastatic** is solid tumour documented by surgery, imaging or biopsy but no distant metastases. Regional lymph nodes can be affected
- **Solid tumour – metastatic** is distant (not regional lymph node) metastases, documented by surgery, imaging or biopsy
- should be determined from the six months prior to admission to your unit
- documented prior to, or at, admission to your unit

Justification

Weighted in the ICNARC model and APACHE II/III scores

Status at discharge from your hospital

Number of fields: One

Field: Status at discharge from your hospital

Options: Alive
Dead

Definition for collection:

- status of the admission at discharge from the hospital housing your unit

---

Justification

Provides important information for interpreting outcome

Status at discharge from your unit

Number of fields: One

Field: Status at discharge from your unit

Options: Alive
Brainstem death
Cardiac death

Definition for collection:

- status of the admission at discharge from your unit
- **Brainstem death** specifies admission was declared brainstem dead. Results of brainstem death test(s) must be documented
- **Cardiac death** includes admissions who leave your unit to become a donor after cardiac death

---

Justification

Provides important information for interpreting outcome

This field is part of the NHS Critical Care Minimum Data Set (CCMDS) approved by the Department of Health and Social Care and supported by the Intensive Care Society (DSCN: 25/2008 Version 1.1). These data support local, regional and national analysis, commissioning and Payment by Results (PbR)

Status at ultimate discharge from acute hospital

Number of fields: One

Field: Status at ultimate discharge from acute hospital

Options: Alive
Dead

Definition for collection:

- the hospital is another acute hospital, not the hospital housing your unit
- this is not necessarily the status at discharge from the acute hospital to which the admission was directly transferred

---

Justification

Provides important information on outcome for the ICNARC model

It is recognised that these data are difficult to obtain. However, they are important for revealing true survival statistics for critical care

Status at ultimate discharge from ICU/HDU

Number of fields: One

Field: Status at ultimate discharge from ICU/HDU

Options: Alive
Dead

Definition for collection:

- ICU/HDU is an ICU or a combined ICU/HDU or an HDU
- ultimate discharge is the physical discharge and recording of that discharge from a bed in another ICU/HDU

Justification

Provides important information for interpreting outcome

It is recognised that these data are difficult to obtain. However, they are important for revealing true survival statistics for critical care

Surgery/procedure conducted within first 24 hours after admission to your unit

---

Number of fields: One

Field: Surgery/procedure conducted within first 24 hours after admission to your unit

Options: Yes
No

Definition for collection:

- specifies whether the admission has undergone surgery or procedure within first 24 hours after admission to your unit
- admission to your unit is the physical admission and recording of that admission to a bed in your unit
- surgery is undergoing all or part of a surgical procedure or anaesthesia for a surgical procedure either in an operating theatre or anaesthetic room; includes open surgery and laparoscopic surgery
- procedure is undergoing vascular and/or interventional radiology or endoscopic treatment either in an operating theatre, anaesthetic room, imaging department or specialist treatment area (includes endoscopy and catheter suites in the hospital)
- includes surgery/procedure performed in your unit that would ordinarily be carried out in theatre or a more ideal location, e.g. where admission is too unstable to move elsewhere and/or the situation is an emergency
- organ donation/retrieval is not considered surgery

Justification

Provides important information on surgery/procedure within first 24 hours after admission to the critical care unit

Temperature

Number of fields: Four

Fields: Lowest central temperature
Highest central temperature

Lowest non-central temperature
Highest non-central temperature

Units of measurement: °C

Definition for collection:

- lowest and highest central/non-central temperature values measured and recorded in the first 24 hours in your unit
- central temperatures are preferred as they are a better indicator of core temperatures
- if the admission stays less than 24 hours, then enter the lowest and highest central/non-central temperature values measured and recorded while in your unit
- tympanic membrane, nasopharyngeal, oesophageal, rectal, pulmonary artery and bladder are considered to be central temperature measurement sites; all other sites are considered to be non-central
- temperature values are included irrespective of whether the value was artificially manipulated through treatment such as central cooling
- temperature values measured and recorded for the purpose of estimating perfusion e.g. toe or ear lobe, are not to be included
- if only one central/non-central temperature value is measured and recorded, then this value is considered the lowest value

---

Justification

Weighted in the ICNARC model and APACHE II/III scores

Text

Number of fields: One

Field: Text

Definition for collection:

- any additional information considered relevant to this admission
- text data entered in this field may provide extra information about data entered elsewhere for a specific field in the dataset or may provide extra information on the admission which is not collected as part of the dataset
- entry of data in the text field is not compulsory
- **no identifiers (patient, nurse, doctor, unit, hospital) should be included in text data entered into this field**
- information entered in the text field may derive from any time period during data collection
- space for comments is limited, please restrict comments to clarification of data entered and additional information not collected as part of the dataset
- comments on conditions not found in the ICNARC Coding Method should not be entered in the Text field. Rather, these should be entered directly into the incomplete code text box for the relevant condition field (e.g. the Primary reason for admission to your unit incomplete code textbox)
- comments to facilitate data validation should not be entered in the Text field. Rather, these should either be entered directly into the online CMP data validation on Platform X, or as validation comments as facilitated by your local CMP software solution (to be uploaded to Platform X as part of the CMP data extract)
    - Please note: ability to upload validation comments with your CMP data extract depends on implementation of the validation module in your local CMP software solution

---

Justification

Despite best intentions and endeavours, no dataset can be completely comprehensive and unequivocally objective, therefore Version 4.0 of the ICMPDS incorporates a field for free text. Information provided in this field will enable the dataset to be improved over time

Total serum bilirubin

Number of fields: Two

Fields: Highest total serum bilirubin
or
Total serum bilirubin missing

Units of measurement: µmol l^{-1}

Definition for collection:

- highest total serum bilirubin value measured and recorded in the first 24 hours in your unit
- if an admission stays less than 24 hours, then enter the highest total serum bilirubin value measured and recorded while on your unit
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in near-patient testing/point of care testing laboratories with formal quality control programmes in operation
- if only one total serum bilirubin value is measured and recorded then this value is considered the highest value
- if no total serum bilirubin values are measured and recorded in the first 24 hours in your unit, then tick total serum bilirubin missing

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Justification

Provides important information for identification of sepsis (Sepsis-3/Sequential Organ Failure Assessment (SOFA)). Weighted in APACHE III score

Transferred to your unit from

Number of fields: One

Field: Transferred to your unit from

Options: ICU or ICU/HDU, your hospital
HDU, your hospital
ICU or ICU/HDU, other acute hospital
HDU, other acute hospital

Definition for collection:

- field is collected where the "Admitted to your unit from (*common routes*)" shortcut is recorded as either "Critical care transfer – via" or "Critical care transfer – direct"
- options for this field are a combination of the location (either "ICU or ICU/HDU" or "HDU") and the hospital housing that location (either "your hospital" or "other acute hospital")
- definitions set out below first define the hospital, and then set out the definitions for the critical care locations within the hospital
- definitions for hospitals
    - **Your hospital** is the hospital housing your critical care unit
    - **Other acute hospital**, one that does not house your critical care unit, is another hospital (can be in the same or a different NHS Trust) that provides a range of acute hospital services to diagnose, treat and care for seriously ill or injured patients; some acute hospitals may provide only specialist services while others will provide general services
- definitions for critical care locations
    - **ICU or ICU/HDU** is either an ICU or a combined ICU/HDU in the hospital providing both Level 3 and Level 2 care
    - **HDU** is an HDU or equivalent step-up/step-down unit in the hospital, where the Critical Care Minimum Data Set (CCMDS) is collected

---

Justification

Provides important information on source of admission

Treatment goals at admission to your unit

Number of fields: One

Field: Treatment goals at admission to your unit

Options:
Pre-surgical preparation
Active treatment
Observation/stabilisation – active treatment not thought to be appropriate
Consideration for organ donation
End-of-life care

Definition for collection:

- specifies the treatment and care goals at admission to your unit
- **Pre-surgical preparation** is admission to your unit for resuscitation, physiological optimisation or monitoring prior to surgery. Pre-surgical preparation is not pre-medication, washing, bowel preparation, shaving etc.
- **Active treatment** is admission to your unit for active treatment
- **Observation – active treatment not thought to be appropriate** is admission to your unit for a period of physiological stabilisation and observation to improve the quality of decision making. E.g. (but not limited to) patients admitted with perceived devastating brain injury (DBI - see https://www.ficm.ac.uk/sites/default/files/dbi-consensus-statement-2018.pdf for further information on these specific cases)
- **Consideration for organ donation** is admission to your unit solely for the purpose of potential organ donation, where treatment to cure or control disease has stopped but life supporting treatment continues whilst the admission is assessed for suitability for organ donation
- **End-of-life care** is admission to your unit where treatment to cure or control disease has stopped. End-of-life care includes physical, emotional, social, and spiritual support for patients and their families. The goal of end-of-life care is to control pain and other symptoms so the patient can be as comfortable as possible. End-of-life care may include palliative care and supportive care

---

Justification

Provides important information on the treatment provided by the critical care unit

Treatment goals at discharge from your unit

Number of fields: One

Field: Treatment goals at discharge from your unit

Options: Active treatment
Not for readmission to critical care
Palliative care

Definition for collection:

- specifies the treatment and care goals at discharge from your unit
- **Active treatment** is discharge for continuing active treatment
- **Not for readmission to critical care** is a documented decision that the patient should not be considered for readmission to critical care
    - must be documented as being in place at discharge from your unit
- **Palliative care** is withdrawal of critical care from which it is deemed that the admission can no longer benefit

---

Justification

Provides important information for interpreting outcome

Treatment withdrawn

Number of fields: One

Field: Treatment withdrawn

Options: Yes
No

Definition for collection:

- specifies whether all clinically indicated treatments, other than comfort measures, were discontinued, on the grounds of lack of benefit to the patient
- decision to withdraw active treatment must be documented

Justification

Important data for interpreting survival statistics and activity analysis

Type of critical care unit (in)

Number of fields: One

Field: Type of critical care unit (in)

Options:
General
Cardiac
Thoracic
Liver
Spinal injury
Obstetric
Burns & plastic
Renal
Neurosciences
Medical
Surgical
Paediatric/neonatal

Definition for collection:

- specifies the type (principal clinical service or predominant patient population) of adult ICU or combined ICU/HDU or HDU from which the admission was transferred prior to admission to your unit
- for mixed units use either General or the predominant specialty

---

Justification

Provides important information on critical care transfers

Type of critical care unit (out)

Number of fields: One

Field: Type of critical care unit (out)

Options:
General
Cardiac
Thoracic
Liver
Spinal injury
Obstetric
Burns & plastic
Renal
Neurosciences
Medical
Surgical
Paediatric/neonatal

Definition for collection:

- specifies the type (principal clinical service or predominant patient population) of adult ICU or combined ICU/HDU or HDU to which the admission was transferred post-discharge from your unit
- for mixed units use either General or the predominant specialty

---

Justification

Provides important information on critical care transfers

Type of surgery/procedure

Number of fields: Two

Fields
Type of surgery procedure
(conducted within 24 hours prior to admission to your unit)
Type of surgery procedure
(conducted within 24 hours after admission to your unit)

Options
Open surgery
Laparoscopic surgery
Vascular and/or interventional radiology
Endoscopic treatment

Definition for collection:

- **Open surgery** is undergoing all or part of an open surgical procedure or anaesthesia for an open surgical procedure in an operating theatre or an anaesthetic room; includes microsurgery
- **Laparoscopic surgery** is undergoing all or part of a laparoscopic surgical procedure or anaesthesia for a laparoscopic surgical procedure in an operating theatre or an anaesthetic room; includes keyhole surgery
- **Vascular and/or interventional radiology** includes imaging guidance by X-ray, CT/MRI, fluoroscopy or ultrasound
- **Endoscopic treatment** is a therapeutic (not diagnostic) endoscopic procedure
- If more than one surgery/procedure is conducted within 24 hours prior to admission to your unit, or within first 24 hours after admission to you unit, select the most invasive/urgent type of surgery/procedure
  - E.g. if laparoscopic surgery turns into open surgery, record as open surgery
- organ donation/retrieval is not considered surgery

Justification

Provide important information on surgery/procedure prior to/after admission to the critical care unit

Ultimate primary reason for admission to your unit

Number of fields: Two

Fields: Ultimate primary reason for admission to your unit
Ultimate primary reason for admission to your unit - incomplete code text box

---

Definition for collection:

- the **Ultimate primary reason for admission to your unit** should describe the precise reason for admission if, after the first 24 hours in your unit, further information has become available from investigations or at autopsy and the Primary reason for admission to your unit recorded is no longer the most appropriate or can be made more explicit
- should only be entered if different from the Primary reason for admission to your unit
- codes are generated by the ICNARC Coding Method
- where the condition required to be coded is not available, code the condition as far as you can and then enter the name of the condition in the "**Ultimate primary reason for admission to your unit - incomplete code text box**" (periodically, these text data are used to update and improve the ICM)
    - **no identifiers (patient, nurse, doctor, unit, hospital) should be included in text data entered into this field**
- See the ICNARC website for an ICM builder and the ICM Guide, which provides further advice on using the ICM

Justification

Provides important additional information to the reason for admission to your unit

Unit-acquired infection

Number of fields: One

Field: Unit-acquired infection

Options: Bloodstream infection
Non-bloodstream infection
Both bloodstream and non-bloodstream infections
No unit-acquired infection

Definition for collection:

- **Bloodstream infection** is the presence of an infection in any blood sample taken for microbiological culture after 48 hours following admission to your unit
    - micro-organisms grown from line tip cultures do not represent bloodstream infections
    - do not count the presence of an infection due to a contaminant (e.g. coagulase-negative s*taphylococcus* - for a list of contaminants and a list of common micro-organisms see Appendix: Unit-acquired infections)
- **Non-bloodstream infection** is the presence of an infection in any non-blood sample (including skin and/or nasal swabs or screens) taken for microbiological culture after 48 hours following admission to your unit
- **Both bloodstream and non-bloodstream infections** is the presence of different infections in both bloodstream and non-bloodstream after 48 hours following admission to your unit
- if the same infection is found both in blood and non-blood samples, record as a bloodstream infection
- **No unit-acquired infection** is the absence of infection in any samples taken for microbiological culture after 48 hours following admission to your unit, or no samples being taken for testing
- it is recognised that this will underestimate the true rate of unit-acquired infections, i.e. by excluding those in samples in the 48 hours following discharge from your unit

---

Justification

Provides important information on unit-acquired infection

Urinary catheter

Number of fields: Two

Core Module

Field: Urinary catheter days

Units of measurement: Calendar days

Daily Organ Support Module

Field: Urinary catheter

Options: Yes
No

Definition for collection:

- a calendar day is any complete calendar day (00:00-23:59) or part thereof, e.g. a patient admitted on 1 January 2021 at 23:45 and discharged on 3 January 2021 at 00:10 would be recorded as having received three calendar days of care

Core Module

- specifies the number of calendar days during which the admission had a urinary catheter in place whilst on your unit
- record 1, 2, 3 etc for one, two, three etc calendar days; record 998 for 998 or more calendar days; record 999 for support occurring but number of days not known

Daily Organ Support Module

- record Yes for **Urinary catheter** for each calendar day the admission had a urinary catheter in place whilst on your unit

Urinary catheter

- is having a urinary catheter placed to drain the bladder

Justification

Provide important information on use of urinary catheter in the critical care unit, including as a denominator for urinary catheter infections

Urine output

Number of fields: Two

Field: Urine output
or
Urine output missing

Units of measurement: ml

Definition for collection:

- total urine output measured and recorded in the first 24 hours in your unit
- units are recommended to chart cumulative urine output to ease calculation of 24-hour total urine output
- no account is taken of the effect of diuretics
- if an admission stays less than 24 hours, then enter the total urine output measured and recorded while in your unit
- where the total urine output is zero, the value zero should be recorded
- if no urine output value is measured and recorded, then tick urine output missing

---

Justification

Weighted in the ICNARC model and APACHE II/III scores. Provides important information for identification of sepsis (Sepsis-3/Sequential Organ Failure Assessment (SOFA))

Vasoactive agent(s) administered during first 24 hours in your unit

---

Number of fields: Eleven

Fields: Vasoactive agent(s) administered during first 24 hours in your unit

Options: Yes
No

Vasoactive agents

Field	Unit of measurement
Dopamine	μg kg^{-1} min^{-1}
Dobutamine	μg kg^{-1} min^{-1}
Adrenaline (epinephrine)	μg kg^{-1} min^{-1}
Noradrenaline (norepinephrine)	μg kg^{-1} min^{-1}
Vasopressin	U min^{-1}
Phenylephrine	μg kg^{-1} min^{-1}
Metaraminol (maximum infusion rate)	mg $hour^{-1}$
Terlipressin (maximum infusion rate)	mg $hour^{-1}$
Metaraminol (total bolus)	mg
Terlipressin (total bolus)	mg

Definition for collection:

- specifies whether the admission had vasoactive agents administered within the first 24 hours following admission to your unit
- if an admission stays less than 24 hours, then record vasoactive agents administered while in your unit
- if vasoactive agent(s) administered during the first 24 hours in your unit, record either the maximum infusion rate or the total bolus from the first 24 hours for the agent(s) administered
- dosage should be to actual body weight. If not available, use estimated actual body weight (as per Body composition)

Justification

Provides important information for identification of sepsis (Sepsis-3/Sequential Organ Failure Assessment (SOFA))

VRE present

Number of fields: One

Field: VRE present

Options: Admission VRE
Unit-acquired VRE
No VRE
No Samples taken

Definition for collection:

- **Admission VRE** is presence of VRE (vancomycin resistant enterococcus) in any sample taken for microbiological examination after admission to your hospital and either prior to admission, or in the first 48 hours following admission, to your unit
- **Unit-acquired VRE** is presence of VRE in any sample taken for microbiological examination after 48 hours following admission to your unit and while still in your unit
- it is recognised that this will underestimate the true rate of unit-acquired infections, i.e. by excluding those in samples in the 48 hours following discharge from your unit
- **No VRE** is absence of VRE in any sample taken for microbiological examination after admission to your hospital and either prior to admission to or during the stay in your unit
- “any sample” includes skin and/or nasal swabs or screens

Justification

Provides important information on unit-acquired infection

White blood cell count

Number of fields: Three

Fields: Lowest white blood cell count
Highest white blood cell count
or
White blood cell count missing

Units of measurement: $x10^9\ l^{-1}$

Definition for collection:

- lowest and highest white blood cell count values measured and recorded in the first 24 hours in your unit
- the effects of steroids, inotropes and splenectomy are ignored
- if an admission stays less than 24 hours, then enter the lowest and highest white blood cell count values measured and recorded while in your unit
- laboratory results only - results of tests performed either in the departments of Clinical Chemistry or Haematology or in near-patient testing/point-of-care testing laboratories with formal quality control programmes in operation
- if only one white blood cell count value is measured and recorded, then this value is considered the lowest value
- if no white blood cell count values are measured and recorded in the first 24 hours in your unit, then tick white blood cell count missing

---

Justification

Weighted in the ICNARC model and APACHE II/III scores

Appendix 1: Levels of care

Level of care definitions are based on ICS Standards and Guidelines 2009

Level 3 – indicated by one or more of the following:

- admissions receiving advanced respiratory monitoring and support due to an acute illness
- admissions receiving monitoring and support for two or more organ system dysfunctions (excluding gastrointestinal support) due to an acute illness
    - admissions solely receiving basic respiratory monitoring and support and basic cardiovascular monitoring and support due to an acute illness only meet Level 2

Level 2 – indicated by one or more of the following:

- admissions receiving monitoring and support for one organ system dysfunction (excluding gastrointestinal support) due to an acute illness
    - admissions solely receiving advanced respiratory monitoring and support due to an acute illness meet Level 3
    - admissions solely receiving basic respiratory and basic cardiovascular monitoring and support due to an acute illness meet Level 2
- admissions receiving pre-surgical optimisation including invasive monitoring and treatment to improve organ system function
- admissions receiving extended post-surgical care either because of the procedure and/or the condition of the admission
- admissions stepping down to Level 2 from Level 3 care

Level 1 – indicated by one or more of the following:

- admission recently discharged from a higher level of care
- admissions receiving a greater degree of observation, monitoring, intervention(s), clinical input or advice than Level 0 care
- admissions receiving critical care outreach service support fulfilling the medium-score group, or higher, as defined by NICE Guidelines 50

Level 0 – indicated by the following:

- admissions in hospital and receiving normal ward care

Appendix 2: How to assess the Glasgow Coma Score

The Glasgow Coma Score is assessed for adults and small children or neonates as follows:

	Adults [1]		Small children or neonates [2]
The best eye opening response:			
Spontaneous		**4**	
To verbal command		**3**	As for adults
To pain		**2**	
No response		**1**	
The best motor response:			
Obeys verbal command		**6**	
Localises pain		**5**	
Flexion withdrawal		**4**	As for adults
Flexion-abnormal/decorticate rigidity		**3**	
Extension/decerebrate rigidity		**2**	
No response		**1**	
The best verbal response:			
Oriented and converses		**5**	Social smile, orientates to sound, follows objects, cooing, jargon, converses. Interacts appropriately with environment
Disoriented and converses		**4**	Consolable cries. Aware of environment, uncooperative interactions
Inappropriate words		**3**	Inappropriate persistent cries, moaning, inconsistently aware of environment/inconsistently consolable
Incomprehensible sounds (not words)		**2**	Agitated, restless inconsolable cries, unaware of environment
No response		**1**	No response
If an admission is intubated, use clinical judgement to score verbal response as follows:			
Appears oriented and able to converse		**5**	Social smile, oriented to sound. Interacts appropriately with environment
Responsive but ability to converse questionable		**3**	Responsive but does not interact appropriately with environment
Generally unresponsive		**1**	Generally unresponsive

References

1 Knaus WA et al. Data Dictionary for Introduction to Data Collection, The APACHE II System: A severity of disease classification system

2 Rubenstein JS, Hageman R. Monitoring of Critically Ill Infants and Children. Intensive Care Monitoring 1988; 621 – 639.

Appendix 3: ACVPU

See In-hospital set of observations recorded within 24 hours prior to referral for critical care expertise

- **Alert**: patient is fully awake with spontaneous opening of the eyes, will respond to voice and will have motor function

- **Confusion**: patient has new-onset confusion, disorientation and/or agitation, where previously their mental state was normal. If it is unknown whether the confusion is new or not, it must be assumed to be new confusion
    - If a patient is known to be confused at their baseline cognitive state, then they should be scored Alert

- **Voice**: patient makes some kind of response when you talk to them, which could be in any of the three component measures of eyes, voice or motor - e.g. patient's eyes open on being asked "Are you OK?". The response could be as little as a grunt, moan, or slight move of a limb when prompted by the voice of the assessor

- **Painful**: patient makes a response on any of the three component measures on the application of pain stimulus, such as a central pain stimulus like a sternal rub or a peripheral stimulus such as squeezing the fingers. A patient with some level of consciousness (a fully conscious patient would not require a pain stimulus) may respond by using their voice, moving their eyes, or moving part of their body (including abnormal posturing)

- **Unresponsive**: patient does not give any eye, voice or motor response to voice or pain (sometimes seen noted as 'Unconscious')

Reference

Royal College of Physicians. *National Early Warning Score (NEWS) 2: Standardising the assessment of acute-illness severity in the NHS*. Updated report of a working party. London: RCP, 2017

Appendix 4: Grading of hepatic encephalopathy

Hepatic encephalopathy is graded as follows:

Grade 0	No abnormality detected
Grade 1	Slowness in cerebration, intermittent mild confusion and euphoria
Grade 2	Confused most of the time, increasing drowsiness
Grade 3	Severe confusion, rousable, responds to simple commands
Grade 4	Unconscious, responds to painful stimuli

Reference

Park GR and Manara AR. Liver and gastrointestinal problems. In: Park GR, Manara AR. Intensive Care. Oxford University Press, 1994, pp108-121.

Appendix 5: New York Heart Association Functional Classification

See Chronic cardiovascular disease

Functional classification based on the degree of physical activity precipitating cardiac symptoms:

Functional Class I	Patients with cardiac disease but without resulting limitation of physical activity. Ordinary physical activity does not cause undue fatigue, palpitations, dyspnoea or anginal pain.
Functional Class II	Patients with cardiac disease resulting in slight limitations of physical activity. They are comfortable at rest. Ordinary physical activity results in fatigue, palpitations, dyspnoea or anginal pain.
Functional Class III	Patients with cardiac disease resulting in marked limitation of physical activity. They are comfortable at rest. Less than ordinary physical activity causes fatigue, palpitations, dyspnoea or anginal pain.
Functional Class IV	Patients with cardiac disease resulting in inability to carry on any physical activity without discomfort. Symptoms of cardiac insufficiency or of the anginal syndrome may be present even at rest. If any physical activity is undertaken, discomfort is increased.

Reference

Criteria Committee of the NYHA. Nomenclature and Criteria for Diagnoses of Diseases of the Heart and Great Vessels (9th Edition). Boston, Little, Brown & Co., 1994.

Appendix 6: Modified Medical Research Council (MMRC) Dyspnoea Scale

See Chronic respiratory disease

Dyspnoea is graded as follows:

Grade of dyspnoea	Description
0	Not troubled by breathlessness except on strenuous exercise
1	Shortness of breath when hurrying on the level *or* walking up a slight hill
2	Walks slower than people of the same age on the level because of breathlessness *or* has to stop for breath when walking at own pace on the level
3	Stops for breath after walking about 100m *or* after a few minutes on the level
4	Too breathless to leave the house *or* breathless when dressing or undressing

Reference

Mahler DA, Wells CK. Evaluation of Clinical Methods for Rating Dyspnea. Chest 1988; 93(3):580-6

Appendix 7: Table of FIO_2 approximations

See Oxygenation and pH

Conversion table for FIO_2 when measured on nasal cannula or mask (see references below):

Values given represent an estimation of the likely overall FIO_2 in the airway, not just the concentration in the mask, assuming a relatively normal respiratory pattern.

Nasal cannula		Face mask		Face mask with reservoir bag		"Venturi" type face mask e.g' Ventimask			Aerosol face mask O2 15 l min^{-1} via nebulizer
l min^{-1}	FIO_2	l min^{-1}	FIO_2	l min^{-1}	FIO_2	Set %	FIO_2	Set %	FIO_2
1	0.22	2*	0.25	6	0.60	24	0.24	35	0.28
2	0.25	3*	0.27	7	0.70	28	0.28	40	0.30
3	0.27	4	0.30	8	0.80	35	0.35	70	0.50
4	0.30	5	0.35	9	0.85	40	0.40	100	0.60
5	0.35	6	0.40	10+	0.90	60	0.50		
		7	0.45						
		8+	0.50						

* we acknowledge that there is some fresh evidence that fresh gas flows less than 4 l min^{-1} are not recommended because of the risk of CO_2 retention.

References

Cox D, Gillbe C. Fixed performance oxygen masks. Hypoxic hazard of low-capacity designs. Anaesthesia 1981; 36:958-964.

Froust GN, Potter WA, Wilons MD, Golden EB. Shortcomings of using two jet nebulizers in tandem with an aerosol face mask for optimal oxygen therapy. Chest 1991; 99:1346-1351.

Goldstein RS, Young J, Rebuck AS. Effect of breathing patterns on oxygen concentration received from standard face masks. Lancet 1982; ii:1188-1190.

Green ID. Choice of method for administration of oxygen. British Medical Journal 1967; 3:593-596.

Hill SL, Barnes PK, Hollway T, Tennant R. Fixed performance oxygen masks: an evaluation. British Medical Journal 1984; 288:1261-1263.

Jones HA, Turner SL, Hughes JMB. Performance of the large-reservoir oxygen mask (Ventimask). Lancet 1984; i:1427-1431.

Leigh JM. Variation in performance of oxygen therapy devices. Annals of the Royal College of Surgeons of England 1973; 52:234-253.

Shapiro BA, Peruzzi WT, Templin R. Hypoxemia and oxygen therapy. In: Shapiro BA, editor. Clinical application of blood gases. 5th edition. Chicago: Mosby, 1995:127-155.

Appendix 8: Unit-acquired infections: contaminants and common micro-organisms

See Unit acquired infection

Contaminants		
Genus	**Species**	**Also known as**
Aerococcus	urinae	
Bacillus	subtillis and others*	
Corynebacterium	All species*	Diphtheroids or coryneforms
Granulicatella	addiacens	Nutritionally variant streptococcus
Micrococcus	All species*	Rothia spp
Propionobacterium	acnes	
Staphylococcus†	epidermidis, haemolyticus, hominis, capitis and others	Coagulase negative staphylococci
Streptococcus	gordonii, mitis, mutans, oralis, sanguis, salivarius, warneri and others	Viridans group streptococci, α-haemolytic streptococci, aerococcus viridans

* Usually not worked out to species level. Often referred to just as 'species'

† Any Staphylococcus that is not either Staphylococcus aureus or Staphylococcus lugdunensis is a contaminant and often referred to as coagulase negative staphylococcus

Common micro-organisms		
Genus	**Species**	**Also known as**
AcInetobacter	All species*	
Aeromonas	hydrophila	
Aspergillus	fumigatus	
Bacteroides	fragilis, fragilis group many other species	Anaerobe
Burkholderia	cepacia	
Candida	All species*	
Cedecea	davisae	
Chryseobacterium	meningosepticum	
Citrobacter	freundii, diversus	
Clostridium	perfringens, bifermentans and other species	
Elizabethkingia	All species*	
Enterobacter	Carbopenem resistant and other species	
Enterococcus	Vancomycin resistant and other species	

Continues on following page

Common micro-organisms		
Genus	**Species**	**Also known as**
Escherichia	Coli and other species	
Haemophilus	influenzae	
Klebsiella	All species*	
Lactobacillus	rhamnosus and other species	
Legionella	L. pneumophila and other species (very rare)	
Leuconostoc	All species*	Lecuconostoc
Listeria	monocytogenes	
Moraxella	All species*	
Morganella	morganii	
Neisseria	All species*	
Pantoea	agglomerans	Enterobacter agglomerans
Pediococcus	Not usually specified	
Peptostreptococcus	All species*	Anaerobic coccus
Pseudomonas	All species*	
Prevotella	losechii	Anaerobe
Proteus	mirabilis, vulgaris	
Raoultella	planticola, terrigena and other species	
Rahnella	aquatilis	
Salmonella	enteritidis, typhi, typhimurium, many other species	
Serratia	All species*	
Sphingomonas	paucimobilis	
Staphylococcus	Lugdunensis	
Staphylococcus	aureus	
Stenotrophomonas	maltophilia	
Streptococcus	anginosus, constellatus, intermedius	Streptococcus milleri
Streptococcus	pneumoniae	Pneumonococcus
Streptococcus	pyogenes	Group A Streptococcus‡
Streptococcus	agalactiae	Group B Streptococcus‡
Streptococcus	Not usually specified	Group C Streptococcus‡
Streptococcus	bovis	Group D Streptococcus‡
Streptococcus	Not usually specified	Group G Streptococcus‡
Weeksella	virosa	

* Usually not worked out to species level. Often referred to just as ‘species’

† Any Staphylococcus that is not either Staphylococcus aureus or Staphylococcus lugdunensis is an invalid organism and often referred to as coagulase negative staphylococcus

‡ These organisms are sometimes referred to as being β-Haemolytic

Comments on the ICMPDS

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