

WardWatcher (2020 version)

Help pages

Definitions for all mandatory pages/fields (Minimum Data Set)

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Section 1: Admission screen

Figure 1

The screenshot shows the WWatcher software interface for the 'SICS' system. The main window is titled 'Admission & Identity' for patient '(1001865233) Micky MOUSE (1001865233)' in the 'ICU' department. The interface includes a sidebar on the left with buttons for 'Admission & Identity', 'History', 'Diagnoses', '24 Hour Physiology', 'ACP', 'Drugs/Interventions', 'Laboratory Data', 'Local', 'Custom Questions', 'Custom Daily', 'HAI', 'Unit Discharge', 'Follow Up', 'Hospital Discharge', and 'Notes'. The main area contains the following fields:

- Personal Information:** Surname (MOUSE), Forename (Micky), Hospital number (1001865233), Date of Birth (10/01/1986), Sex (M/F) (F), Unit admission date (15/08/2020), Time (10:00), Unit admission age (34), CHI number known (Y/N) (Y), CHI number (1001865233), Date admitted to this hospital (15/08/2020), Gap (days) (0).
- Consultant Information:** Unit consultant (Foster), Referring consultant (Foster), Admitted from (name) (A&E), Admit from (type) (B. Recovery/theatre (post operation)), Housed within (A. This hospital site), Previously located (A. Emergency Department), Housed within (A. This hospital site), Nature of surgery (A. Emergency/Urgent).
- Contact Information:** Patient's Address, Next of Kin (including email if appropriate) (MICKYANDMINNIE@DISNEY.COM), GP Details, Post code, Telephone (KA5 5DR, 01412215522).
- Admission Comments:** RTA, fractured femur, sternum and ribs x4 left side.

The bottom status bar shows: 'Current user: Administrator', 'Record 1 of 1 selected', and 'Pat ID: 21241'. There are also buttons for 'View Chart' and 'Print Kardex'.

1.1 General

Data are to be collected for all admissions, regardless of age, severity of illness, reason for admission, length of stay etc. Data entered into WardWatcher should be measured and/or recorded in any part of the permanent/electronic records.

1.2 Admission and identity data

Pat_ID: Every new admission will automatically be allocated a patient identification (Pat_ID) number. This is useful when data needs to be anonymous. If the same patient is readmitted or transferred to another Critical Care Unit they will have another Pat_ID number allocated.

Hospital number: This is the hospital number/case record number or CHI number given to the patient by your hospital.

Date of birth: If the date of birth is unobtainable use judgement to estimate the year of birth and record as the 1st January of estimated year. Indicate in notes that the DOB has been an estimate.

Unit admit date: this is the date on which the patient was admitted to your unit. Admission to your unit is defined as physical admission and recording of that admission to a bed in your unit.

Time: This is the time at which the patient was admitted to your unit. Accuracy of time is important as occupancy is calculated minute by minute.

CHI number: Ten-digit number given to all patients who are registered with a GP in Scotland. The first six digits are the same as the patient's date of birth. If a patient does not have a CHI number, please enter N in the CHI number known (Y/N) box- *do not record a number in the chi box if it is not known.*

Admit this hospital: This is the date on which the patient was admitted to THIS hospital.

Referring Consultant: The name of the consultant who has referred the patient to the critical care area.

Unit Consultant: Consultant linked to this unit who has overall responsibility for this patient.

Admitted from (name) This is the local name of the area from which the patient was directly admitted to your unit and does not use the generic labels/categories used by SICSAG. Information in this field is used purely for local analysis and does not form part of the SICSAG minimum data set.

Admitted from (type): This is the source from which the patient was directly admitted to your unit. The source is described generically using one of the 11 mutually exclusive options.

- A. Emergency Department: patient admitted directly from the Emergency Department
- B. Recovery/theatre (post operation) the patient has undergone all or part of surgical procedure or anaesthesia for a surgical procedure
- C. Recovery only (no operation) Patient has been managed in recovery area until a bed has become available in this unit. Patient did not undergo any surgery or procedure requiring anaesthesia.
- D. Ward
- E. Intensive Care Unit
- F. High Dependency Unit
- G. Other intermediate area: this could be a CCU or other area where the level of care is greater than the normal ward but is not an ICU or HDU.
- H. Obstetric area
- I. Imaging Department: patient underwent interventional radiology, endoscopy or a procedure requiring general, local or regional anaesthesia
- J. Clinic: patient admitted directly from outpatients or clinic
- K. Home or normal residence: an admission directly from the community without being admitted to any other part of the hospital.

Housed within: Hospital site the patient is directly admitted from. Options are:

- A. This hospital
- B. Other hospital/same health board
- C. Other hospital/other health board (any NHS hospital within the UK)
- D. Non-NHS facility (private hospital within the UK or non UK hospital)

Previously located: If a patient has been admitted from a transient area, you will be asked where the patient was located prior to that area.

Transient areas are:

- A. Emergency department
- D. Ward
- E. Intensive Care Unit
- F. High Dependency Unit
- G. Other Intermediate Care Area
- H. Obstetrics
- K. Home or Normal Residence

Housed within: Hospital site the patient is directly admitted from. Options are:

- A. This hospital
- B. Other hospital/same health board
- C. Other hospital/other health board (any NHS hospital within the UK)
- D. Non-NHS facility (private hospital within the UK or non UK hospital)

Nature of Surgery: options are emergency/urgent OR scheduled/elective.

Surgery is defined as undergoing all or part of a surgical procedure or anaesthesia for a surgical procedure in an operating theatre or an anaesthetic room.

Emergency/Urgent

- Immediate surgery, where resuscitation (stabilisation and physiological optimisation) is simultaneous with surgical treatment OR surgery as soon as possible after resuscitation (stabilisation or physiological optimisation).

Scheduled/Elective

- Early surgery but not immediately life threatening OR surgery at a time to suit both patient and surgeon.

Section 2: History screen

Figure 2

Section	Field	Value	Input Type
Circumstances of admission to this Unit	Readmission to this Unit during this hospital stay (Y/N)	N	Checkbox
	Specialty admitting to this Unit	Neurology	Dropdown
	Admission to this Unit prompted by blunt or penetrating trauma (Y/N)	Y	Checkbox
	CPR in 24 hours prior to admission to this Unit (Y/N)	N	Checkbox
	Antimicrobials in 48 hours prior to admission to this Unit (Y/N)	Y	Checkbox
	Antimicrobials during day 1 or day 2 in this Unit (Y/N)	N	Checkbox
	Unit admission weight (kg)		Text
	Height (cm)		Text
	Body Mass Index (BMI)	0	Text
	Clinical frailty scale		Dropdown
Past Medical History	Very severe cardiovascular disease (Y/N)	N	Checkbox
	Severe respiratory disease (Y/N)	N	Checkbox
	Biopsy proven cirrhosis (Y/N)	N	Checkbox
	Imaging proven cirrhosis (Y/N)	Y	Checkbox
	Portal hypertension (Y/N)	N	Checkbox
	Hepatic encephalopathy (Y/N)	N	Checkbox
	Acute leukaemia (Y/N)	N	Checkbox
	Chronic leukaemia (Y/N)	N	Checkbox
	Metastatic disease (Y/N)	N	Checkbox
	Lymphoma (Y/N)	N	Checkbox
Surgery	Surgery at admission to this Unit or in previous 7 days (Y/N)	Y	Checkbox
	Surgery after Unit admission but within first 7 days in this Unit (Y/N)	Y	Checkbox
	Nature surgery (most acute)	A. Emergency/Urgent	Dropdown
Pregnancy	Status at admission to this Unit	A. Not known to be pregnant	Dropdown

2.1 General

The history screen records data on the circumstances which led to the patient's admission to the unit, if they have had antimicrobials in the 48 hours prior to admission, if they have had surgery prior to admission, height, weight, BMI, clinical frailty scale, ethnicity, pregnancy status and information on co-morbidity (PMH).

2.2 Circumstances of admission

Readmission to this unit during this hospital stay: Enter Yes (Y) if the patient is being admitted for a second or subsequent time to this unit during this hospital stay (i.e. the patient has remained an in-patient in this hospital between now and the last admission to this unit).

Admit speciality: Indicate the primary speciality under whose care the patient was admitted. The choice is fixed to a list determined by SICSAAG and is not locally modifiable.

Admission to this unit prompted by blunt or penetrating trauma: Enter Yes (Y) if the patient was a blunt or penetrating trauma admission.

CPR in 24 hours prior to admission to unit: Specifically refers to cardiopulmonary resuscitation in the 24 hours prior to admission to your unit. It does NOT include cardiopulmonary resuscitation received **AFTER** admission to your unit. Cardiopulmonary resuscitation must include either internal or external cardiac massage. Pre-cordial thumps or defibrillation without cardiac massage are excluded.

Antimicrobials in 48 hours prior to admission to this unit: Enter Yes (Y) if the patient has been given antimicrobials in the 48 hours prior to admission for an acute infection– this does not include prophylactic antimicrobials, antifungal/antiviral therapy, SDD (selective digestive decontamination); local treatment, erythromycin as a prokinetic.

Unit admit weight (kg) – **if unknown then enter 0**

Height (cm) – **if unknown then enter 0**

BMI is automatically calculated when height and weight are entered.

Clinical Frailty Scale 1-9, It is recommended that the CFS is not used in people with stable long-term disabilities (for example, cerebral palsy), learning disabilities or autism. Only these patients should be excluded from CFS scoring – this option can be found after number 9.

Ethnicity – options are

- A. White including Polish, Irish, Gypsy, Other white
- B. Mixed or multiple ethnic groups
- C1. South East Asian, Pakistani, Indian
- C2. Chinese
- D. African
- E. Caribbean or Black
- F. Other ethnic group including Arab
- G. Refused/Not provided by patient
- H. Not Known

Surgery: Enter yes (Y) if the patient has had surgery either immediately preceding admission to the unit or in the previous 7 days.

Enter yes (Y) if the patient has surgery after admission to the unit (only applies for the first 7 days in the unit).

Nature of surgery select either A. Emergency / Urgent or B. Shedule/Elective.

Please note if the patient has surgery prior to or on admission and then further surgery in the first 7 days the most acute should be selected.

2.3 Pregnancy

The patient is not pregnant, pregnant, or recently pregnant.

2.4 Past Medical History

All of the sections explained below are no longer required in HDU

Very severe cardiovascular disease: specifies whether the patient has fatigue, claudication, dyspnoea or angina at REST. Where any activity increases symptoms, symptoms must be due to myocardial or peripheral vascular disease. Functionally, this patient cannot stand alone, walk slowly or dress without symptoms. Definition equals the New York Heart Association, Class IV.

Very severe cardiovascular disease must be documented prior to or at admission to your unit.

Severe respiratory disease: specifies whether the patient has permanent shortness of breath WITH LIGHT ACTIVITY, due to pulmonary disease. Functionally, this patient is unable to work and has shortness of breath performing most normal activities of daily living (e.g. walking 20 metres on level ground, walking slowly in the house, climbing one flight of stairs; or dressing or standing).

Severe respiratory disease must be documented prior to or at admission to your unit.

Biopsy proven cirrhosis: Biopsy proven cirrhosis must be documented prior to or at admission to your unit.

Imaging proven cirrhosis: Imaging proven cirrhosis must be documented prior to or at admission to your unit.

NB: This has been included for research purposes only, and if answered yes will not receive any chronic health points towards patients APACHE score.

Portal Hypertension: Evidence of portal hypertension is the presence of oesophageal or gastric varices demonstrated by surgery, imaging or endoscopy; or the demonstration of retrograde splenic-venous flow by ultrasound.

DO NOT include GI bleeding without the evidence of portal hypertension.

Portal hypertension must be documented prior to or at admission to your unit.

Hepatic encephalopathy: episode of hepatic encephalopathy grade 1 or greater (see below). The episodes of encephalopathy must have occurred IN THE SIX MONTHS prior to admission to your unit, and must be documented prior to or at admission to your unit.

Grading of hepatic encephalopathy:

- Grade 1: no abnormality detected
- Grade 2: slowness of cerebration, intermittent mild confusion and euphoria
- Grade 3: confused most of the time, increasing drowsiness
- Grade 4: severe confusion, rousable, responds to simple commands
- Grade 5: unconscious, responds to painful stimulus

Acute Leukaemia: the patient has acute myelogenous leukaemia, acute lymphocytic leukaemia or multiple myeloma. The presence of such conditions must have been evident in the SIX MONTHS PRIOR to admission to your unit and must be documented prior to or at admission to your unit.

Chronic Leukaemia: the patient has chronic myelogenous leukaemia or chronic lymphocytic leukaemia. The presence of such conditions must have been evident in the SIX MONTHS PRIOR to admission to your unit and must be documented prior to or at admission to your unit.

Metastatic disease: the patient has distant (Not regional lymph node) metastases, documented by surgery, imaging or biopsy. The presence of metastases must have been evident in the SIX MONTHS PRIOR to admission to your unit and must be documented prior to or at admission to your unit.

Lymphoma: the patient has active lymphoma documented by surgery, imaging or biopsy. The presence of lymphoma must have been evident in the SIX MONTHS PRIOR to admission to your unit and must be documented prior to or at admission to your unit.

AIDS: the patient has a definitive diagnosis of AIDS according to current WHO definition. The patient is HIV positive with clinical complications. Clinical complications include pneumocystis carinii, Kaposi's sarcoma, lymphoma, TB, and toxoplasma infection. DO NOT include AIDS-related complex or HIV positivity alone. AIDS must be documented prior to or at admission to your unit.

Immunosuppression: the patient has received 0.3mg per kg or more of prednisolone or an equivalent dosage of another corticosteroid, DAILY FOR THE SIX MONTHS PRIOR to admission to your unit. Where the body weight of an adult is unknown, you should answer Y (yes) if the patient has received 20mg or more per day of prednisolone or an equivalent dosage of another corticosteroid, DAILY FOR THE SIX MONTHS PRIOR to admission to your unit.

Chronic renal replacement: the patient currently requires chronic renal replacement therapy (chronic haemodialysis, haemofiltration or peritoneal dialysis) for irreversible renal disease.

Section 3: Diagnosis screen

Figure 3

The screenshot shows the WWatcher software interface for patient Olivia ORANGE (H123456). The main area is titled 'Diagnoses' and contains the following sections:

- APACHE diagnosis** (Admission from Recovery/Theatre requires a SURGICAL diagnosis):
 - Reason for admission to this unit (APACHE III): 116. GI obstruction (any cause)
 - Corresponding APACHE II diagnosis: 50. GI perforation/obstruction
 - System failing: 4. Gastrointestinal
- SICS diagnostic coding**:
 - Diagnosis requiring HOSPITAL admission: GI obstruction (tumour)
 - Diagnosis requiring Unit admission: GI obstruction (tumour)
 - Operation performed (if from theatre): Large bowel surgery
- Other significant diagnosis** 1 through 6 (all empty).

The interface includes a sidebar with navigation buttons (Admission & Identity, History, Diagnoses, 24 Hour Physiology, ACP, Drugs/interventions, Laboratory Data, Local, Custom Questions, Custom Daily, HAI, Unit Discharge, Follow Up, Hospital Discharge, Notes, Update from PAS/CIS, Help for this Screen, Previous Patient, Next Patient, Patient List, Bed Plan, Log Off) and a status bar at the bottom showing 'Current user: Administrator', 'Record 1 of 1 selected', and 'Pat ID: 21234'.

3.1 General

The diagnosis screen requires an APACHE diagnosis (reason for admission to your unit), SICS diagnosis (diagnosis requiring admission to hospital AND unit*), operation performed (if applicable) and reason for unit admission.

HDU units do not need to complete the APACHE Diagnosis only the SICS Diagnosis.

3.2 APACHE Diagnosis

The APACHE classification to categorise patients according to the primary diagnosis precipitating admission to the unit.

The APACHE diagnosis is mapped to a co-efficient, which is used as a component in the calculation of a mortality probability.

According to APACHE methodology patients are surgical or medical according to their source of admission. **Surgical patients are those admitted directly from theatre/recovery following an operation. All other patients are defined as medical.**

In some circumstances patients may be admitted to the unit for medical reasons following surgery (e.g. dysrhythmias during routine surgery). In this case the APACHE methodology still states that the diagnostic classification is made according to the surgery, which the patient underwent.

In other circumstances, patients may be admitted to the unit from a ward within hours of undergoing surgery. In this case the APACHE methodology still states that the diagnostic classification is made according to the medical condition, which precipitated admission.

Please remember that while these rules may appear unsatisfactory it is better to comply with the rules and definitions, which you deem to be incorrect rather than to substitute personal rules and/or definitions.

See Discharge page for information on exclusions from APACHE scoring.

3.3 SICS diagnostic coding

The APACHE diagnosis caters for only a single primary diagnosis. It is a broad classification designed to divide patients into groups whose reason for admission has a similar impact or mortality probability. In addition the choice of diagnostic grouping is small and cannot be modified.

The SICS diagnostic coding is an attempt by the Scottish Intensive Care Society to group patients into categories, which are more useful descriptors of the types of patients being admitted to Scottish units. In addition, the coding is not limited to a single primary diagnosis but allows reason for hospital admission as well as multiple reasons for unit admission to be entered.

The SICS diagnostic coding includes obstetric, cardiothoracic and transplant diagnoses.

Operation performed (if from theatre)- this must be completed for all patients who are admitted to the unit ICU or HDU from reception recovery (post operation).

Copy Hospital to Unit button: If reason for admission to unit is **exactly** the same as reason for admission to hospital this allows 'copying' of diagnosis entered for reason for admission to hospital to reason for admission to unit.

Section 4: Severity of Illness Screen

Figure 4

The screenshot shows the 'Severity' screen for patient (0102640007) Olivia ORANGE (H123456) in the ICU. The interface includes a sidebar with navigation buttons like 'Admission & Identity', 'Diagnoses', '24 Hour Physiology', 'ACP', 'Drugs/Interventions', 'Laboratory Data', 'Local', 'Custom Questions', 'Custom Daily', 'HAI', 'Unit Discharge', 'Follow Up', 'Hospital Discharge', 'Notes', 'Monitor Data', 'Laboratory data', 'Arterial Blood Gases', 'Update from PAS/CIS', 'Help for this Screen', 'Previous Patient', 'Next Patient', 'Patient List', 'Bed Plan', and 'Log Off'. The main content area is divided into several sections:

- Blood Pressure:** Shows 'Highest SYSTOLIC pressure' at 180 (Low/High scale), 'Paired diastolic pressure' at 90, and 'Lowest DIASTOLIC pressure' at 90. 'Paired systolic pressure' is 180.
- Neurological Function:** Includes 'Able to assess GCS in first 24 hours in this Unit (Y/N)' (checked), 'Unit assessment while intubated (Y/N)' (unchecked), 'Eyes' (3. To command), 'Motor' (6. Obeys commands), and 'Verbal' (4. Confused). 'Pre-sedation GCS available (Y/N)' and 'Elements of GCS available (Y/N)' are unchecked. 'Pre-sedation total GCS (3-15)' is 0.
- Blood Tests:** Lists Sodium, Potassium, Serum bicarbonate, Urea, Creatinine, Total bilirubin, Haemoglobin (g/dL), WBC (10⁹/L), and Lactate (mmol/L) with input fields.
- TPR:** Shows 'Heart rate' at 100 (Low/High scale), 'Central temperature recorded (Y/N)' (checked), 'Central temperature' at 36.9 (36/38 scale), and 'Respiratory rate' at 20 (30/33 scale).
- Arterial Blood Gases (ABGs):** Shows 'Values in kPa' and 'INTUBATED only'. Fields for 'Lowest PaO2', 'Highest O2%', 'Paired O2%', 'Paired PaCO2', and 'Paired H+' are present.
- Sign Off:** Includes 'NB Data locked if Sign Off complete', 'Complete - All data entered (Y/N)' (checked), and 'Checked by' (R Hall).

At the bottom, it shows 'Current user: Administrator', 'Record 1 of 1 selected', and 'Pat ID: 21234'.

Please note that the APACHE II severity score on Ward Watcher includes pre-sedation GCS, however when the data is submitted centrally an adjusted score is used to the recalibrated model for Scottish data and this version does not take into account pre-sedation GCS.

4.1 General

Physiology data form part of the APACHE methodology.

Physiology data derive from the time period during the first 24 hours in the unit.

For patients admitted for pre-surgical preparation the first 24 hours in your unit commences at the time of admission to your unit.

Time spent outside your unit during the first 24 hours (e.g. in theatre) is counted when determining the first 24 hours in your unit.

Pre-unit physiology data are disregarded (except for pre-sedation GCS).

Only physiology data recorded on the patient chart or record during the first 24 hours following admission to your unit are considered valid data.

Data collected by: enter the name or the initials of the person who collected or entered the data.

4.2 Observations

Only charted or recorded data in the first 24 hours of admission should be used.

Observations should not be recorded for any admission during periods of iatrogenic disturbance (e.g. physiotherapy, turning, crying etc).

If an admission stays less than 24 hours then enter the lowest and highest rates while in your unit.

If only one measurement is taken it should be entered as the lowest and highest measurement.

Blood Pressure: enter the highest systolic BP value PLUS the paired diastolic BP from the SAME measurement.

Enter the lowest diastolic BP value PLUS the paired systolic BP from the SAME measurement.

Central temperature: Tympanic membrane thermometers are generally set to record central temperature but if unsure please check with your medical physics department.

Respiratory rate: for patients who are ventilated the respiratory rate should account for both ventilated and spontaneous breaths in a minute.

4.3 Urine Output

Urine output able to measure: answer yes if the urine output was accurately measured and recorded. Answer no if unable to measure urine (e.g. due to incontinence).

Urine output total: if an admission stays less than 24 hours enter total urine output measured and recorded while in your unit.

4.4 Neurological Function

Able to assess GCS in first 24 hours in unit: This is a clinical decision that should be made by clinical staff responsible for the patient in the first 24 hours. If the patient has received sedation (iatrogenic), affecting their GCS for all of the period (first 24 hours) then an accurate GCS will not be available.

If patient has had sedation and your clinical decision is that it is no longer affecting GCS (within first 24 hours) then enter yes and enter lowest recorded GCS in first 24 hours. If no sedation has been given then enter yes and enter lowest recorded GCS in first 24 hours.

Self-sedated? Where an admission is self-sedated due to accidental or self-poisoning, they should be recorded as "never sedated or paralysed..." and neurological status can be assessed as seen.

If patient is intubated, the verbal section of the GCS will change to:

Clearly orientated (5 points)

Responsive but orientation in doubt (3 points)

Clearly unresponsive (1 point)

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This is to encourage an appropriate assessment of the patient's neurological function and not an assessment of the patient's ability to speak, which is prevented by intubation.

Pre-sedation GCS: If an accurate GCS is NOT available in the first 24 hours you will be asked if a pre-sedation GCS is available. Pre-sedation GCS should be a GCS recorded prior to patient being sedated (iatrogenic) in another unit e.g. on arrival to Emergency Department prior to intubation. This must be recorded in the notes. An option to record total GCS or elements (eyes, motor, verbal) is available. If the eyes/motor and verbal score is documented in case notes please record this. It is acceptable to assume that documentation of a patient being alert and orientated = GCS 15.

4.5 Arterial blood gases

Any gas: all four values from the **SAME** arterial blood gas with the **LOWEST** PaO₂, regardless of intubation status.

Intubated only: all four values from the **SAME INTUBATED** arterial blood gas with the **HIGHEST** FiO₂. Values are those measured and recorded in the first 24 hours in your unit. Inspired oxygen concentration is expressed as a percentage within WardWatcher.

4.6 Blood tests

Lowest and highest values measured and recorded in the first 24 hours in your unit.

If a patient stays less than 24 hours, then enter values measured and recorded during period in your unit.

Only LABORATORY RESULTS should be used. If only one value was recorded and measured, then enter this value as both the lowest and highest value.

All available data entered: enter yes when all the available data have been entered. In the 2020 upgrade when Y is entered it will not allow any data to be altered on this screen, however if there needs to be a change then the user will need to change the Y to a N prior to editing. If you do not enter yes, then WardWatcher will assume that there is missing data and will alert the user of this fact when an attempt is made to discharge the patient. All sections of the severity of illness page are mandatory except ABGs and Blood tests as it is accepted that in some cases these will not have been performed. WardWatcher will presume these tests are normal if they are not entered.

Section 5: ACP Screen

Figure 5a

The screenshot shows the WardWatcher interface for patient Olivia ORANGE (H123456) in the ICU. The main window is titled 'Augmented Care Period (ACP) Daily Assessments' and shows a summary of care levels and a table of daily assessments.

Date	Ventilated	Advanced Cardiovascular Support	Renal Support	Level 3	Level 2	Level 1	Level 0
01/09/2017							X
02/09/2017					X		
03/09/2017				X			
04/09/2017					X		
05/09/2017							X
06/09/2017							X
07/09/2017	X			X			

Summary of care levels:

Category	Days
Days of ventilation	1
Days of renal support	0
Days at Level 3	2
Days at Level 2	2
Days at Level 1	0
Days at Level 0	3

5.1 General

Augmented Care Period (ACP) data are used to assess the resources used in treating acutely ill patients and in an attempt to stratify them into different levels of care.

5.2 Augmented Care Period (ACP)

Data is collected for each calendar day for a 24-hour period (midnight to midnight) except for the day of admission and discharge when the period may be less than 24 hours.

The **highest level of care** (ie)the sickest the patient is)for that period should be recorded (e.g. if a patient has been ventilated via ETT and then extubated and receiving oxygen via a facemask, connected to a ventilator via ETT should be chosen).

WardWatcher will calculate the level of care daily based on the support of five organ systems, see Calculation of level of care below for more information.

Click on **New day** at the top of the ACP section (figure 5a) to enter ACP details (figure 5b). To view other dates, click on desired date to highlight and then click on **View highlighted**.

Figure 5b

WardWatcher
File Edit Help

ACP Calendar Day Details (1001865233) Micky MOUSE (1001865233) ICU

For each intervention, enter Yes (Y) if the patient has had it AT ANY POINT during this calendar day

Respiratory Support

Patient on a ventilator in this Unit at some point today (Y/N) N

Select the highest level of support from the respiratory matrix below

	ETT	Trache	Mask/Hood	Mask/Cannula	Nil
Connected to a ventilator	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CPAP	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O2 50% or more	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
O2 less than 50%	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Nil	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input checked="" type="radio"/>

Reintubated at some point today (Y/N) N

Intubation/reintubation considered at some point today (Y/N) N

High flow nasal oxygen administered at some point today (Y/N) N

Cardiovascular Support

Multiple IV vasoactive drugs and/or IV antiarrhythmics (Y/N) N

Single IV vasoactive drug or IV antiarrhythmic (Y/N) N

Cardiac output monitoring (Y/N) N

Type of cardiac output monitoring

Circulatory instability due to hypovolaemia (Y/N) N

Central venous catheter (including dialysis catheter) (Y/N) Y

Arterial line (Y/N) Y

Renal Support

Acute renal replacement therapy (haemofiltration/dialysis) (Y/N) N

Neurological Support

Invasive neuro monitoring (eg ICP, jugular bulb) (Y/N) N

Severely agitated or epileptic needing constant nursing attention and/or sedation N

Risk to airway from CNS depression (NOT due to sedation) (Y/N) N

Gastrointestinal Support

Parenteral (IV) nutrition administered today (Y/N) N

Enteral (via tube, NOT oral) nutrition administered today (Y/N) Y

Dermatological Support

Major skin rashes/exfoliation or burns (Y/N) N

Use of multiple trauma dressings (Y/N) N

Complex dressing (eg open abdomen, large skin areas) (Y/N) N

Other Support

Epidural infusion (Y/N) N

Antibiotic, antifungal, or antiviral administered today (Y/N) N

X-Ray for VAP, or sample sent for suspected CVC/BSI (Y/N) N

Patients with no ACP system support

Needs more monitoring than available on a general ward (Y/N) Y

Locally defined ACP (Y/N)

P.C.A.

Date: 16/08/2020
Day: 2

New Day
Next Day
Previous Day
Delete...
Cancel
Save

Data collected by: m

Help for this Screen

Current user: Administrator Pat ID: 21241

5.2.1 Respiratory Support

Patient on a ventilator in this unit today? Answer **Yes** if mechanical ventilation has occurred in your unit from midnight to midnight on the specified date. If a patient is connected to a ventilator for **ANY** length of time in this time period, the level of care recorded in their ACP should reflect this (BIPAP/ some CPAP machines should also be included). Selecting 'yes' will then provide a further 3 options: ETT, Trache and Mask/Hood – select one option.

Patient on a ventilator in this unit today? Answer **no** if mechanical ventilation has not occurred from midnight to midnight on the specified date. Please then select the highest level of respiratory support the patient has received in that 24 hr period. Please note that short term increases in FiO₂ for transfers/suctioning/physiotherapy etc should not be included.

NB: Non-invasive ventilation (NIV)/BIPAP should be recorded as connected to a ventilator by mask or hood.

Reintubated at some point today (Y/N)- answer **yes (Y)** if the patient had been extubated then reintubated during the 24 hours.

Intubation/reintubation considered at some point today? Answer **yes(Y)** if the patient has had a *formal* medical review/assessment for intubation/reintubation. Answer **no** if no formal medical review/assessment has taken place.

High flow nasal oxygen administered at some point today? Answer **yes(Y)** if patient has just had HFNO₂.

5.2.2 Cardiovascular Support

Multiple IV vasoactive drugs and/or antiarrhythmic? Answer **yes** if patient receiving multiple intravenous vasoactive and/or rhythm controlling drugs simultaneously to support or control arterial blood pressure, cardiac output or organ perfusion (e.g. Noradrenaline and Amiodarone)

Single IV vasoactive drug and/or antiarrhythmic? Answer **yes** if patient receiving a single intravenous vasoactive or rhythm controlling drug to support or control arterial blood pressure, cardiac output or organ perfusion.

Cardiac output monitoring? Answer **yes** if patient's cardiac *output* has been measured continuously (in the specified time period) via pulmonary artery catheter, pulse contour analysis, oesophageal doppler or other method. Please note that ECG monitoring should **not** be included in this category.

Type of cardiac output monitoring? If you have answered **yes** to the above, please select the type of cardiac output monitoring from the drop down menu – PA catheter, oesophageal doppler, pulse contour analysis or other.

Circulatory instability due to hypovolaemia? Answer **yes** if patient receives treatment of circulatory instability due to hypovolaemia from any cause.

Central venous catheter (including haemofiltration/dialysis catheter)? Answer **yes** if a patient has the use of a central line for monitoring/fluids/drugs/IV access and/or vascular access for renal support (haemofiltration/dialysis) – does *not* include AV fistula or AV graft.

Arterial line? Answer **yes** if the patient has an arterial line for continuous monitoring of the arterial pressure and/or sampling of arterial blood.

5.2.3 Renal Support

Acute renal replacement therapy (haemofiltration/haemodialysis)? Answer **yes** if the patient has received acute renal replacement therapy in the specified time period.

5.2.4 Neurological Support

Invasive neuro monitoring (e.g. ICP, jugular bulb)? Answer **yes** if neuro monitoring is invasive. Does not include EEG/Bispectral Index (BIS) monitoring etc.

Severely agitated or epileptic needing constant nursing attention and/or sedation – answer **yes** if the patient requires continuous IV medication to control seizures and/or cerebral monitoring.

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Agitation – answer **yes** if the patient requires *constant* care/supervision due to their level of agitation. This does not include patients that are slightly confused/disorientated that require occasional re-orientation to time, place or person.

CNS depression enough to prejudice airway (not due to sedation)? Answer **yes** if there is sufficient central nervous system depression sufficient to prejudice airway and protective reflexes e.g. CVA, overdose, severe hypoglycaemia etc.

5.2.5 Gastrointestinal Support

Parenteral Nutrition? Answer **yes (Y)** if the patient is receiving Total Parenteral Nutrition (TPN).

Enteral nutrition? Answer **yes(Y)** if the patient is receiving enteral nutrition via Nasogastric tube/PEG tube/naso-jejunal tube- Answer **no (N)** if eating via oral or parenteral route.

5.2.6 Dermatological Support

Major skin rashes/exfoliation or burns? Answer **yes** if greater than 30% of total body surface area is affected.

Use of multiple trauma dressings? Answer **yes** if there is the use of multiple trauma dressings e.g. multiple limb or limb and head dressings.

Complex dressings (e.g. open abdomen, large skin areas)? Answer **yes** for the use of complex dressings e.g. open abdomen, or large skin area greater than 30% of total body surface area, vacuum dressings, or large trauma dressings.

5.2.7 Other Support

Epidural infusion? Answer **yes** if the patient has had an epidural infusion in the specified time period.

Antibiotic, antifungal, or antiviral administered today (Y/N) - answer **yes (Y)** if patient has been given any antibiotics, antifungal or antiviral drugs today.

X-RAY for VAP ,or sample sent for suspected CVC/BSI (Y/N)- answer **yes (Y)** if patient has a suspected healthcare acquired infection and an x-ray has been taken for a ? Pneumonia for ICU patients only.

If a central venous catheter tip sample has been sent for? Line infection or blood culture for a blood stream infection this applies to both ICU and HDU patients.

5.2.8 Other Monitoring

Needs more monitoring than available on a general ward? Answer **yes** unless the patient is ward fit and ready to be discharged (**the patient will be a yes until after midnight on the day the decision is made that the patient is ward fit as they will be at least level 1 from midnight until reviewed** they could be level 0 from after midnight until discharged providing they remain ward fit) If the patient is ward fit from the start and is in the unit due to lack of ward beds then it would be appropriate for this patient to be a level 0.

5.3 Calculating Levels of Care

WardWatcher will score levels of care based on support of five different organ systems: respiratory, cardiovascular, renal, neurological and dermatological. The GI section is not included.

Level 3

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- Advanced respiratory support (connected to a ventilator via ETT or tracheostomy)
- Two or more organ systems are being supported (except basic respiratory and basic cardiac)
- One organ system is being supported and a different system is in chronic failure*

Level 2

- One organ supported

Level 1

- Epidural or/and
- General observations requiring more monitoring than can be provided on a general ward

Level 0

- A patient is assessed as level 0 if not assessed as level 1, 2 or 3 (e.g. no organ support and adequate monitoring could be provided on a general ward)

Section 6: Unit Discharge Screen

Figure 6

The screenshot shows the 'Unit Discharge' screen in the WWatcher software. The patient is identified as '(1001865233) Micky MOUSE (1001865233)' in the ICU. The 'Unit Outcome' is '1. Improved'. The 'Unit stay' is 0.0 days. The 'Unit Discharge' section is highlighted in red. It includes fields for 'Declared ready for Unit discharge (Y/N)' (Y) on '16/08/2020' at '16:00', and 'Actually discharged from Unit on' on '00/00/00' at '00:00'. The 'Unit Deaths' section includes 'Died on' (00/00/00 at 00:00) and checkboxes for 'Brain stem death tests performed (Y/N)', 'Brain stem death confirmed (Y/N)', 'Organ donation requested (Y/N)', and 'Organs donated (Y/N)'. The 'Local Discharge Data Fields (Y/N)' section includes 'COVID POSITIVE (Y/N)' (N) and 'User field 2' through 'User field 4'. The 'Local Discharge Data Fields (Numeric)' section includes 'User field 5' through 'User field 8'. The 'Discharge comments' field is empty. The 'Data Opt Out' is 'N'. The 'Print Transfer' and 'Discharge Patient' buttons are visible. The current user is 'Administrator' and the record is 'Record 1 of 1 selected'. The patient ID is 'Pat ID: 21241'.

6.1 Unit Discharge Details

Unit outcome: status of the patient at discharge from your unit. Died includes admissions who leave your unit to become heart beating organ donors.

Ready for discharge: Enter date and time that a MEDICAL DECISION is made to discharge the patient to another unit. This will usually be when unit level of Critical Care is no longer required or a higher or specialist level of care is required (e.g. a patient being transferred from HDU to ITU or general ITU to Neuro ITU).

In some circumstances transfer may not be in the best interest of the patient but due to pressure on beds or staffing issues. In this circumstance the patient is NOT ready for discharge and no should be entered.

No should be entered if a patient self discharges against medical advice.

Actually discharged: date and time of discharge from your unit is the latest documented date of the patient being physically in your unit.

Gap between ready and actual discharge: WardWatcher will calculate time (hours/minutes) between patient being ready for discharge and actually discharged.

Gap considered

If there is a gap between ready for discharge and actual discharge then you will be asked to consider gap as normal or abnormal. More than 4 hours is considered abnormal. Normal would be the time taken by unit staff to get patient ready for discharge and assemble all documents required for transfer.

Destination (name): the actual name of the destination to which the patient was transferred. This information is for local use only.

Destination (type): the generic destination to which the patient was DIRECTLY transferred following discharge from your unit. Options are:

- A: Ward
- B: Intensive care unit
- C: High dependency unit
- D: Other intermediate area
- E: Recovery (NOT for operation)
- F: Home or normal residence

Housed within: Hospital site patient discharged to, options are:

- This hospital
- Other hospital/same health board
- Other hospital/other health board: any NHS hospital within the UK
- Non-NHS facility: private hospital within the UK or non UK hospital

Reason discharged: options are:

- Fully ready for non-unit care: planned discharge for an admission no longer requiring the current level of care
- Early (shortage of unit beds)
- Early (shortage of unit staff)
- Specialist care: discharge to another unit where a higher level of care and/or specialist care is provided
- Repatriation to unit nearest home
- Psychiatric care
- Palliative care
- Self discharge

Expected hospital outcome: indicate the consensus view, at the time of Critical Care discharge, of the medical/nursing team responsible for the care of the patient. (ICU only)

In case of deterioration: Indicate the consensus view, at a time of unit discharge, of the medical/nursing team responsible for the care of the patient.

Died on: date and time of death in your unit. If the patient is declared brain stem dead, then the date and time sought is on the completion of the second set of tests confirming brain stem death.

Brain stem death tests performed: Brain stem death tests performed as per local protocol and documented in notes.

Brain stem death tests confirmed: enter yes if the patient was declared brain stem dead.

Organ donation requested: enter yes if organ donation was requested by medical staff or organ transplant coordinator to the next of kin.

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Organs donated: enter yes if the patient went to surgery for organ harvesting as a heart-beating organ donor or non-beating heart donor.

Avoid severity of illness scoring: If severity of illness data are not completed you will be given two options of why this is not collected in order to be able to discharge your patient. Options are:

- A. Missing core physiology data or
- B. Unit decision not to score this patient (unit currently not collecting severity of illness data on all or any patients)
- C. <8 hours, <16 years old, readmission
- D. Burns, cardiac diagnosis, no apache diagnosis, liver transplant
- E. Palliation
- F. Repatriation

Most HDUs do not currently collect severity of illness data so an automatic default to 'unit decision not to score this patient' has been set up, this does not apply to HDU patients in ICU.

Patients who are not validated for APACHE II methodology will not have an APACHE score calculated and will be automatically omitted from the Standardised Mortality Ratio (SMR). These patients can be discharged from WardWatcher without severity of illness scoring or this question being answered.

Patients who are omitted from APACHE II methodology are:

- under 16 years
- unit stay less than 8 hours
- readmission to same unit during the same hospital stay
- Diagnosis of burns, liver transplant, patients who have had a CABG or ECMO patients.
- Patients who are admitted to the ICU for palliative care
- Patients who are repatriated to the ICU nearest their family

SICSAG ADVISES UNITS TO COLLECT SEVERITY OF ILLNESS DATA ON ALL PATIENTS ADMITTED TO ICU or Combined ICU/HDUs as different case-mix adjustment tools will be used in the future that may have no omissions.

Please note there is a screen 'lock' once patient discharged from unit.

After a patient is discharged from a unit, changes to data will only be possible with administrator access on all pages except hospital discharge.

Section 7: Hospital Discharge Screen

Figure 7

7.1 General

This page is only activated when unit discharge is complete. Hospital and ultimate hospital discharge information is required to collect hospital and ultimate hospital outcome and calculate length of stay. It is **essential** for calculation of the Standardised Mortality Ratio (SMR) data.

7.2 Discharge from this hospital

Date: enter date discharged from your hospital.

Outcome: status of the patient at discharge from your hospital.

Sent to (type): the generic destination type to which the patient was discharged.

Sent to (name): the actual name of the destination to which the patient was discharged.

7.3 Early end to acute episode in this hospital

APACHE II requires a discharge date from the original hospital as well as the ultimate 'acute' hospital. In some circumstances 'non-acute' care (psychiatric care and rehabilitation) will be delivered at another hospital thus ending the acute episode but in some circumstances these services are available on site. This will create an unfair bias to these hospitals by increasing the patients length of stay and sometimes increasing their mortality. By answering this section, SICSAG will be able to account for these differences.

Date ended: enter date patient was transferred to a rehabilitation or psychiatric ward within your hospital, if applicable.

Reason ended: enter reason for early end to acute episode (rehabilitation or psychiatric care)

7.4 Ultimate hospital discharge

If a patient is discharged to 'another acute hospital' this section will need to be completed.

Date: enter date discharged from final 'acute' hospital.

Outcome: status of the patient at discharge from that hospital.

Sent to (type): the generic destination type to which the patient was discharged.

Sent to (name): the actual name of the destination to which the patient was discharged.

7.5 Early end to acute episode in final hospital

Date ended: enter date patient was transferred to a rehabilitation or psychiatric ward within final 'acute' hospital, if applicable.

Reason ended: enter reason for early end to acute episode (rehabilitation or psychiatric care)