

## Manual of operations for the “TOXIC-Europe PATIENTS” questionnaire in Castor

The aim is to include patients and to collect patients’ data.

This questionnaire should be completed **once** for each patient included in the TOXIC-Europe study.

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**Table 1: Abbreviations**

ABV	Alcohol By Volume	HHNC	Hyperglycemic Hyperosmolar Nonketotic Coma
ALS	Amyotrophic Lateral Sclerosis	HIV	Human Immunodeficiency Virus
AMI	Acute Myocardial Infarction	ICD	Implantable Cardioverter Defibrillator
APACHE	Acute Physiology And Chronic Health Evaluation	ICD-10	
AV	Atrioventricular	ICU	Intensive Care Unit
BMI	Body Mass Index	ID	Identification
CABG	Coronary Artery Bypass Graft	INR	International Normalised Ratio
CGA	Albuminuria Category	IV	Intraventricular
CKD	Chronic Kidney Disease	KDIGO	Kidney Disease Improving Global Outcomes
CKD-EPI	Chronic Kidney Disease Epidemiology Collaboration	Lab	Laboratory
CO	Carbon Monoxide	LOS	Length of Stay
COPD	Chronic Obstructive Pulmonary Disease	MARS	Molecular Absorbents Recirculating System
CPR	Cardiopulmonary resuscitation	MPN	Myeloproliferative Neoplasms
DSA	Data Sharing Agreement	NICE	National Intensive Care Evaluation
DSM		NYHA	New York Heart Association
ECG	Electro Cardio Graphy	PIC	Poisons Information Centre
eCRF	Electronic Case Report File	PSS	Poisoning Severity Score
ER	Emergency Room	RRT	Renal Replacement Therapy
FiO2	Fraction of Inspired Oxygen	SOFA	Sequential Organ Failure Assessment
GCS	Glasgow Coma Scale	SAPS	Simplified Acute Physiology Score
GFR	Glomerular Filtration Rate	TIA	Transient Ischemic Attack
GI	Gastrointestinal	WBC	White Blood cell Count
HDU	High Dependency Unit	WHO	World Health Organisation

Start

1. Introduction and inclusion criteria: information to read.

**The inclusion criteria:**

For the patient to be eligible for inclusion the patient must meet the 4 criteria shown in this reminder:

1. The patient was admitted to the ICU/HDU directly from an ambulance or from the Emergency Room, or was transferred from a medical or surgical ward to the ICU/HDU;
2. Intoxication was the primary reason for ICU/HDU admission;
  - If the primary reason for ICU/HDU admission of the patient was other than intoxication, for example: trauma after car accident caused by intoxication while driving, the patient is not eligible for TOXIC-Europe.
3. The patient stayed for at least 4 hours at the ICU/HDU;
  - If the patient was discharged from the ICU/HDU within 4 hours the patient is not eligible for TOXIC-Europe.
4. The patient is 18 years or older.

If the patient meets these four criteria the patient is eligible for TOXIC-Europe, proceed by clicking the 'Next' button.

**The exclusion criteria:**

A patient who meets any of the following exclusion criteria cannot be included:

1. The patient was admitted to the ICU for another sever concomitant condition (e.g. trauma due to car accident while intoxicated);
2. The patient was admitted at the ICU for < 4 hours;
3. The patient is younger than 18 years.

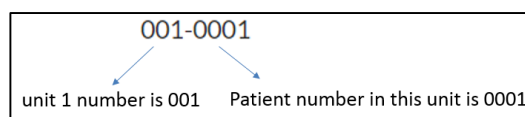
In case of doubt, you can always contact us at [contact@toxicstudy.org](mailto:contact@toxicstudy.org) .

2. ID number & internal screening log: information to read.

In the TOXIC-Europe PATIENTS questionnaire, each time you include a new patient, you have to create a new " Record" . Each patient (and record) has a unique identification (ID) number. This ID number consists of three digits for the code of your unit (sent by the coordinating center by email) and four digits for the code of this specific patient.

For example, patient 1 in unit 1 has 001-0001 as ID patient (and record) number.

<input type="checkbox"/> Record ▲	Institute
<input type="checkbox"/> 001-0001	Unit 1



Please, keep a screening log with all record ID numbers and the corresponding patient records at your unit to link back which record ID belongs to which patient. You can find a template for such a screening log on our website <https://toxicstudy.org> page "Documents". document called " Screening log template LOCAL use". This local screening log is for INTERNAL use at your unit.

### Dates and Times of Admission and Discharge

#### 3. In-hospital location before ICU/HDU admission

3.1. Was the patient directly admitted from the Emergency Room or an ambulance OR was the patient transferred from a ward?

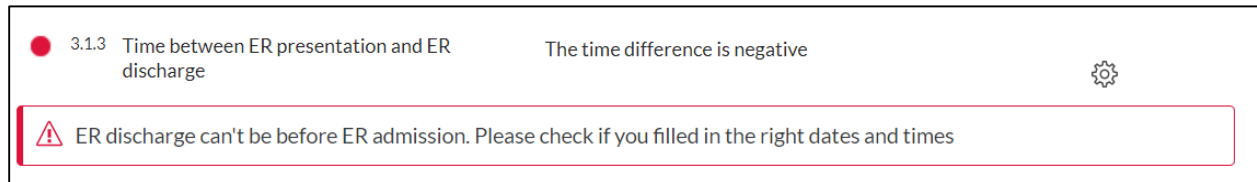
Select one of the two available options.

When 'The patient was admitted from the Emergency Room or an ambulance' is selected in question 3.1, a text will show asking to enter dates and times.

3.1.1 Enter date in '*dd-mm-yyyy*' and time in '*hh:mm*' of ER presentation.

3.1.2 Enter date in '*dd-mm-yyyy*' and time in '*hh:mm*' of ER discharge.

3.1.3 The time elapsed between ER presentation and ER discharge is automatically computed. Nothing to do, except if such a warning appears:



Such a warning means that you have probably entered dates and times that do not match a logical chronological order. Please check the date and times you have entered and correct them if necessary.

When 'The patient was transferred from a ward' is selected in Q 3.1, a text will show asking:

3.1.4 Where did the intoxication take place: select one of the two available options.

If " Before hospital admission" is selected in Q 3.1.4, a text will show asking:

3.1.4.1 Enter date in '*dd-mm-yyyy*' and time in '*hh:mm*' of ER presentation.

3.1.4.2 Enter date in '*dd-mm-yyyy*' and time in '*hh:mm*' of ER discharge.

3.1.4.3 The time elapsed between ER presentation and ER discharge is automatically computed. Nothing to do, except if such a warning appears:

●	3.1.4.3 Time between ER presentation and ER discharge	The time difference is negative	⚙️
⚠️ ER discharge can't be before ER admission. Please check if you filled in the right dates and times			

Such a warning means that you have entered dates and times that don't match a logical chronological order. Please check the date and times you have entered and correct them if necessary.

If "During hospital stay" is selected in Q 3.1.4, a text will show asking:

- 3.1.5 Enter date in *'dd-mm-yyyy'* and time in *'hh:mm'* of ward admission.
- 3.1.6 Enter date in *'dd-mm-yyyy'* and time in *'hh:mm'* of ward discharge.
- 3.1.7 The time elapsed between ward admission and ward discharge is automatically computed. Nothing to do, except if such a warning appears:

●	3.1.7 Time between admission on ward and discharge from ward	The time difference is negative	⚙️
⚠️ Ward discharge can't be before ward admission. Please check if you filled in the right dates and times			

Such a warning means that you have entered dates and times that don't match a logical chronological order. Please check the date and times you have entered and correct them if necessary.

### 3.2. Optional remark

Select "Delay in patient's admission due to the COVID-19 pandemy" if you think that this was the case.

Select "Other" to enter any remark you want in the free text field that appears.

## 4. Intensive Care or High Dependency Unit

- 4.1. Enter date in *'dd-mm-yyyy'* and time in *'hh:mm'* of ICU/HDU admission.
- 4.2. Automatic calculation of the time elapsed between ER discharge and ICU/HDU admission. Nothing to do except if a warning appears (same as in Q 3.1.3); then you have to check the dates and times you entered.
- 4.3. Automatic calculation of the time elapsed between ward discharge and ICU/HDU admission based on the entered dates and times, if the patient was transferred from a ward.
- 4.4. Enter date in *'dd-mm-yyyy'* and time in *'hh:mm'* of ICU/HDU discharge.
- 4.5. Automatic calculation of the time elapsed between ICU/HDU admission and ICU/HDU discharge based on the entered dates and times. Nothing to do except if a warning appears; then you have to check the dates and times you entered (same as in Q 3.1.3).

## 5. Hospital discharge

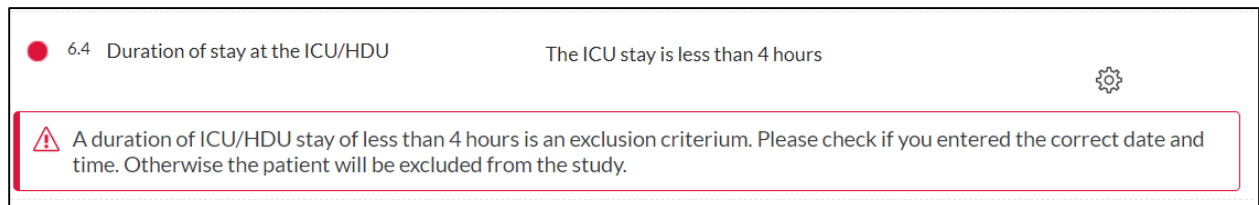
- 5.1. Enter date in *'dd-mm-yyyy'* and time in *'hh:mm'* of hospital discharge.

5.2. Automatic calculation of the time elapsed between ICU/HDU discharge and hospital discharge based on the entered dates and times. Nothing to do except if a warning appears; then you have to check the dates and times you entered (same as in Q 3.1.3).

## 6. Durations computations

Q 6.1 up to Q 6.6: automatically calculated durations of stay at the ER, ward, ICU/HDU.

If the duration of stay at the ICU/HDI was less than 4 hours, a warning will show:



Please, check that the dates and time entered at Q 4.1 and Q 4.4. If the duration of stay at the ICU/HDU is shorter than 4 hours, the patient cannot be included in the study.. You have to stop filling in this questionnaire for this patient.

If the duration of stay at the ICU/HDI was less than 24 hours, a text will show:

- 6.5.1 This field appears when the duration of ICU/HDU stay was less than 24 hours based on the entered dates and times of ICU/HDU admission and discharge.
- If the patient was not transferred to another ICU/HDU (e. at the ICU/HDU), select 'No'.
- If the patient was transferred to another ICU/HDU within 24 hours after ICU/HDU admission, select 'Yes'. When 'Yes' is selected, a text will show asking to complete the record with information retrieved from the other ICU/HDU the patient was transferred to. It is important to note that when the patient is transferred to another ICU/HDU within 24 hours after the first admission (at your ICU/HDU), patient data required to complete this form should be retrieved from the other ICU/HDU, including: ICU/HDU treatments, complications, length of ICU/HDU stay, vital status of the patient at hospital discharge and 30 days after the first admission (at your ICU/HDU).

## 7. Contact with Poisons Information Centre (PIC)

7.1. If a Poisons Information Centre (PIC) was contacted, select 'Yes'.

- If a PIC was not contacted for advice on the patient, select 'No'.
- If information on contact with a PIC is not known or available to you, select 'Unknown'.

7.1.1. OPTIONAL. This field appears when **'Yes'** was selected at Q 7.1.

- If the PIC has given the information that there is no intoxication, select 'No intoxication'.
- If the PIC has estimated the intoxication as mild, select 'Mild intoxication'.
- If the PIC has estimated the intoxication as moderate, select 'Moderate intoxication'.
- If the PIC has estimated the intoxication as severe, select 'Severe intoxication'.
- If the severity of intoxication was not estimated by the PIC, select 'Severity not estimated by the PIC'.
- If information on the estimation of toxicity by the PIC is not known or available to you, select 'Unknown'.

7.1.2. OPTIONAL. This field appears when **'Yes'** was selected at Q 7.1.

- If the PIC has given the advice that no hospital admission was needed, select 'No admission needed'.
- If the PIC has given the advice that the patient should be admitted to a normal nursing ward, select 'Admission to a normal nursing ward'.
- If the PIC has given the advice that the patient should be admitted to the ICU/HDU, select 'ICU/HDU admission'.
- If the PIC hasn't given any advice about the necessity of admission, select 'No advice about admission'.
- If the advice from the PIC about the necessity of admission is not listed as an option provided, select '*Other*'. Specify which other admission advice was provided in question Q 7.1.2.1.
- If information on the advice from the PIC on the necessity of admission is not known or available to you, select 'Unknown'.

## Patient characteristics

### 8. Age, gender, weight and height

8.1. Enter the age of the patient at hospital admission in years.

- Note that an age older than 18 years is one of the patient criteria to be included in the TOXIC-Europe study.

8.2. Select the most appropriate option for the gender of the patient. If the patient is or was neither **'Male'** nor **'Female'**, select **'Non-binary'**.

- If any information on the gender of the patient is not known or available to you, select '*Unknown or not available*'.

- 8.3. Enter the patient's weight at hospital admission in kilograms (kg).
- 8.4. Enter the patient's height at hospital admission in meters (m).
- 8.5. The BMI is automatically calculated, based on the weight and height you entered.
- If the BMI is higher than 50 or lower than 10, a warning will appear and you have to check the values you entered for the patient's weight and/or height. If the BMI is actually higher than 50, please click the cogwheel next to the BMI, select "Comments" and confirm that you have entered the weight and height correctly and that the patient has morbid obesity.

## 9. Comorbidities

- 9.1. Check the boxes of the comorbid conditions (acute or chronic) that are most applicable to the patient at ICU/HDU admission (to 2 hours of ICU/HDU admission). For the definitions of the here listed acute and chronic comorbid conditions see **Table 1**.
- If there is another important comorbid condition that could influence the patient's length of ICU or hospital stay (LOS) or IC-treatment that is not listed in the options provided, select 'Other'.
  - If the patient has none of the comorbidities listed in the options provided and no other comorbidities that could influence the outcome of the patient (ICU- and hospital stay or ICU treatment), and the intoxication is the only pathological condition of the patient at ICU admission, select 'None'.

- 9.1.1. If you have selected '**Other**' at Q 9.1, this field will appear to enter/describe the other relevant (acute or chronic) comorbid condition present at ICU admission (to 2 hours of ICU/HDU admission).


**Table 1. List of comorbid conditions and their definitions**

Comorbid condition	Definition
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<b>Acute Myocardial Infarction (AMI)</b>	<p>The criteria include detection of rise and/or fall of cTn with at least one value above the 99<sup>th</sup> percentile and with at least one of the following:</p> <ol style="list-style-type: none"> <li>Symptoms of AMI</li> <li>New ischemic ECG changes</li> <li>Development of pathological Q waves</li> <li>Imaging evidence of new loss of viable myocardium or new regional wall motion abnormality in a pattern consistent with an ischemic etiology</li> <li>Identification of a coronary thrombus by angiography including intracoronary imaging or by autopsy</li> </ol> <p>In case there is evidence of an imbalance between myocardial oxygen supply and demand unrelated to coronary thrombosis, the thrombus identification (e) <u>will be replaced</u> by: Imaging evidence of new loss of viable myocardium, or new regional wall motion abnormality in a pattern consistent with an ischemic etiology.</p> <p><i>According to the "Fourth Universal Definition of Myocardial Infarction (2018):</i>  <a href="https://www.onlinejacc.org/content/accj/72/18/2231.full.pdf">https://www.onlinejacc.org/content/accj/72/18/2231.full.pdf</a></p>
<b>Acute airway obstruction</b>	<ol style="list-style-type: none"> <li>Acute airway obstruction of the upper airway caused by e. g. infection (epiglottitis), foreign bodies, anaphylaxis, irritant gases and (angio)edema unrelated to the intoxication.</li> <li>Acute lower airway obstruction caused by e. g. pneumothorax or barotrauma.</li> </ol> <p><i>Uptodate (april 3<sup>rd</sup> 2020):</i>  <a href="https://www.uptodate.com/contents/clinical-presentation-diagnostic-evaluation-and-management-of-central-airway-obstruction-in-adults">https://www.uptodate.com/contents/clinical-presentation-diagnostic-evaluation-and-management-of-central-airway-obstruction-in-adults</a>,  <i>Textbook of Surgery, Fourth Edition. Published 2020</i>  <a href="https://onlinelibrary.wiley.com/doi/pdf/10.1002/9781119468189.ch71">https://onlinelibrary.wiley.com/doi/pdf/10.1002/9781119468189.ch71</a>  <i>Goldfrank's Toxicologic Emergencies, Ninth Edition. Published 2011</i></p>
<b>Addiction</b>	<p>"Addiction is a chronic medical disease involving complex interactions among brain circuits, genetics, the environment, and an individual's life experiences. People with addiction use substances or engage in behaviors that become compulsive and often continue despite harmful consequences."</p> <p><i>American Society of Addiction Medicine:</i>  <a href="https://www.asam.org/Quality-Science/definition-of-addiction">https://www.asam.org/Quality-Science/definition-of-addiction</a></p> <p>Criteria added by the DSM-5 specific for substance abuse:</p> <ol style="list-style-type: none"> <li>The substance use causes or increases physical or psychiatric problems</li> <li>More substance is required to get the same effect (tolerance)</li> <li>Withdrawal symptoms appear and decrease after use of the substance</li> </ol> <p><i>DSM-5 criteria</i>  <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3767415/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3767415/</a></p>
<b>Arrhythmia</b>	<p>Co-existing medically treated arrhythmia (antiarrhythmic drugs, anti-coagulants, antiplatelet, calcium channel or beta-blockers, catheter ablation, implantable cardioverter defibrillator (ICD) or pacemaker) unrelated to but may be exacerbated by the intoxication reason of ICU-admission.</p>

	<p><a href="https://www.heart.org/en/health-topics/arrhythmia/prevention--treatment-of-arrhythmia">https://www.heart.org/en/health-topics/arrhythmia/prevention--treatment-of-arrhythmia</a></p>																																																																										
<p><b>Chronic cardiovascular insufficiency</b></p>	<p>Including cardiomyopathy, severe heart valve or coronary diseases with angina or symptoms at rest or minimal physical effort such as changing clothing and day to day care (NYHA Class IV).</p> <p><i>New York Heart Association (NYHA)</i>  <a href="https://www.heart.org/en/health-topics/heart-failure/what-is-heart-failure/classes-of-heart-failure">https://www.heart.org/en/health-topics/heart-failure/what-is-heart-failure/classes-of-heart-failure</a></p>																																																																										
<p><b>Chronic hemodialysis</b></p>	<p>Indicated for patients with: “symptoms or signs attributable to kidney failure (serositis, acid-base or electrolyte abnormalities, pruritus); inability to control volume status or blood pressure; a progressive deterioration in nutritional status refractory to dietary intervention; or cognitive impairment. This often but not invariably occurs in the GFR range between 5 and 10 ml/min/1.73 m<sup>2</sup>” (KDIGO).</p> <p><i>Kidney Disease Improving Global Outcomes (KDIGO)</i>  <a href="https://kdigo.org/wp-content/uploads/2017/02/KDIGO_2012_CKD_GL.pdf">https://kdigo.org/wp-content/uploads/2017/02/KDIGO_2012_CKD_GL.pdf</a></p>																																																																										
<p><b>Chronic Kidney Disease (CKD)</b></p>	<p>“CKD is defined as abnormalities of kidney structure or function, present for &gt;3 months, with implications for health and CKD is classified based on cause, GFR category, and albuminuria category (CGA).”</p> <p style="text-align: center;"><b>Prognosis of CKD by GFR and albuminuria category</b></p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="3" rowspan="2"></th> <th colspan="3">Persistent albuminuria categories</th> </tr> <tr> <th colspan="3">Description and range</th> </tr> <tr> <th colspan="3"></th> <th>A1</th> <th>A2</th> <th>A3</th> </tr> </thead> <tbody> <tr> <td colspan="3"></td> <td>Normal to mildly increased</td> <td>Moderately increased</td> <td>Severely increased</td> </tr> <tr> <td colspan="3"></td> <td>&lt;30 mg/g &lt;3 mg/mmol</td> <td>30-300 mg/g 3-30 mg/mmol</td> <td>&gt;300 mg/g &gt;30 mg/mmol</td> </tr> </tbody> </table> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th colspan="4" rowspan="2"></th> <th colspan="3">Prognosis of CKD by GFR and Albuminuria Categories: KDIGO 2012</th> </tr> <tr> <th colspan="3">GFR categories (ml/min/ 1.73 m<sup>2</sup>) Description and range</th> </tr> </thead> <tbody> <tr> <td rowspan="6" style="writing-mode: vertical-rl; transform: rotate(180deg);">GFR categories (ml/min/ 1.73 m<sup>2</sup>) Description and range</td> <td>G1</td> <td>Normal or high</td> <td>≥90</td> <td style="background-color: #008000;"></td> <td style="background-color: #ffff00;"></td> <td style="background-color: #ffa500;"></td> </tr> <tr> <td>G2</td> <td>Mildly decreased</td> <td>60-89</td> <td style="background-color: #008000;"></td> <td style="background-color: #ffff00;"></td> <td style="background-color: #ffa500;"></td> </tr> <tr> <td>G3a</td> <td>Mildly to moderately decreased</td> <td>45-59</td> <td style="background-color: #ffff00;"></td> <td style="background-color: #ffa500;"></td> <td style="background-color: #ff0000;"></td> </tr> <tr> <td>G3b</td> <td>Moderately to severely decreased</td> <td>30-44</td> <td style="background-color: #ffa500;"></td> <td style="background-color: #ff0000;"></td> <td style="background-color: #ff0000;"></td> </tr> <tr> <td>G4</td> <td>Severely decreased</td> <td>15-29</td> <td style="background-color: #ff0000;"></td> <td style="background-color: #ff0000;"></td> <td style="background-color: #ff0000;"></td> </tr> <tr> <td>G5</td> <td>Kidney failure</td> <td>&lt;15</td> <td style="background-color: #ff0000;"></td> <td style="background-color: #ff0000;"></td> <td style="background-color: #ff0000;"></td> </tr> </tbody> </table> <p>Green: low risk (if no other markers of kidney disease, no CKD); Yellow: moderately increased risk; Orange: high risk; Red, very high risk.</p>				Persistent albuminuria categories			Description and range						A1	A2	A3				Normal to mildly increased	Moderately increased	Severely increased				<30 mg/g <3 mg/mmol	30-300 mg/g 3-30 mg/mmol	>300 mg/g >30 mg/mmol					Prognosis of CKD by GFR and Albuminuria Categories: KDIGO 2012			GFR categories (ml/min/ 1.73 m <sup>2</sup> ) Description and range			GFR categories (ml/min/ 1.73 m <sup>2</sup> ) Description and range	G1	Normal or high	≥90				G2	Mildly decreased	60-89				G3a	Mildly to moderately decreased	45-59				G3b	Moderately to severely decreased	30-44				G4	Severely decreased	15-29				G5	Kidney failure	<15			
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	G5	Kidney failure	<15																																																																								

	<p>This table shows the prognosis based on GFR and albuminuria category. All patients within the low risk group (green) <u>do not have CKD</u>.</p> <p><i>Kidney Disease Improving Global Outcomes (KDIGO)</i>  <a href="https://kdigo.org/wp-content/uploads/2017/02/KDIGO_2012_CKD_GL.pdf">https://kdigo.org/wp-content/uploads/2017/02/KDIGO_2012_CKD_GL.pdf</a></p> <p>For the calculation of the GFR we use the formula from the Chronic Kidney Disease Epidemiology Collaboration (CKD-EPI):</p> $\text{GFR} = 141 \times \min(\text{Scr}/\kappa, 1)^\alpha \times \max(\text{Scr}/\kappa, 1)^{-1.209} \times 0.993^{\text{age}}$ <p>For women: <math>\times 1.018</math>          For Afro-American: <math>\times 1.159</math></p> <p>Scr is serum creatinine in <math>\mu\text{mol/L}</math>  <math>\kappa</math> is 61.9 for women en 79.6 for men  <math>\alpha</math> is -0.329 for women en -0.411 for men          min is minimum Scr/<math>\kappa</math> or 1          max is maximum Scr/<math>\kappa</math> or 1</p> <p><i>Direct link to an online GFR calculator:</i>  <a href="https://www.kidney.org/professionals/kdoqi/gfr_calculator">https://www.kidney.org/professionals/kdoqi/gfr_calculator</a></p> <p>For the CKD-EPI formula Serum Cystatin C is not needed. You can find the calculated GFR in the result of CKD-EPI creatinine equation (red arrow):</p> <div data-bbox="820 1081 1421 1753" style="border: 1px solid #ccc; padding: 10px;"> <p style="text-align: center;"><b>GFR Calculator</b></p> <p>Glomerular filtration rate (GFR) is the best overall index of kidney function. Normal GFR varies according to age, sex, and body size, and declines with age. The National Kidney Foundation recommends using the CKD-EPI Creatinine Equation (2009) to estimate GFR.</p> <p>Serum Creatinine: <input type="text"/> <input checked="" type="radio"/> mg/dL <input type="radio"/> <math>\mu\text{mol/L}</math></p> <hr/> <p>Serum Cystatin C: <input type="text"/> mg/L</p> <hr/> <p>Age: <input type="text"/> Years</p> <hr/> <p>Gender: <input checked="" type="radio"/> Male <input type="radio"/> Female</p> <hr/> <p>Race: <input checked="" type="radio"/> Black <input type="radio"/> Other</p> <hr/> <p>Standardized Assays: <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> Not Sure</p> <hr/> <p>Remove body surface adjustment: <input type="radio"/> Yes <input checked="" type="radio"/> No <input type="radio"/> Not Sure</p> <hr/> <p style="text-align: center;"><b>CALCULATE</b></p> <p style="text-align: center;"><b>Results</b></p> <p style="text-align: center;">              CKD-EPI creatinine equation (2009) <input type="text"/> mL/min         </p> </div>
<p><b>Chronic Obstructive Pulmonary Disease (COPD)</b></p>	<p>Chronic obstructive disease (including emphysema/bronchitis), resulting in severe exercise restriction (i.e., unable to climb stairs or perform household duties; or</p>

CA  
Use  
GFR  
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	<p>documented chronic hypoxia, hypercapnia, secondary polycythemia or respirator dependency.</p> <p><i>Ho KM, Finn J, Knuiman M, Webb SAR. Combining multiple comorbidities with Acute PhysiologyScore to predict hospital mortality of critically ill patients: a linked data cohort study. Anaesthesia, 2007;62:1095-1100</i>  <a href="https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1365-2044.2007.05231.x">https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1365-2044.2007.05231.x</a>  The American Thoracic Society  <a href="https://www.thoracic.org/professionals/clinical-resources/critical-care/clinical-education/mechanical-ventilation/respiratory-failure-mechanical-ventilation.pdf">https://www.thoracic.org/professionals/clinical-resources/critical-care/clinical-education/mechanical-ventilation/respiratory-failure-mechanical-ventilation.pdf</a>  Zimmerman JE, Kramer AA, McNair DS, Malila FM. Acute Physiology and Chronic Health Evaluation (APACHE) IV: Hospital mortality assessment for today's critically ill patients. <i>Crit Care Med</i>, 2006 may;34(5):1297-1310  <a href="https://journals.lww.com/ccmjournal/Fulltext/2006/05000/Acute_Physiology_and_Chronic_Health_Evaluation.1.aspx">https://journals.lww.com/ccmjournal/Fulltext/2006/05000/Acute_Physiology_and_Chronic_Health_Evaluation.1.aspx</a></p>
<b>Cirrhosis</b>	<p>“Biopsy proven cirrhosis and documented portal hypertension; episodes of past upper GI bleeding attributed to portal hypertension; or prior episodes of hepatic failure/encephalopathy/coma.”</p> <p><i>Ho KM, Finn J, Knuiman M, Webb SAR. Combining multiple comorbidities with Acute PhysiologyScore to predict hospital mortality of critically ill patients: a linked data cohort study. Anaesthesia, 2007;62:1095-1100</i>  <a href="https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1365-2044.2007.05231.x">https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1365-2044.2007.05231.x</a></p>
<b>Delirium</b>	<p>A with an appropriate screening tool established delirium during the admission period: from hospital admission to two hours of ICU admission. An appropriate screening tool is a tool that allows to establish a delirium within one (doctor’s) service. In case your screening tool requires information from multiple services to establish a delirium or the screening could not have been assessed because of decreased consciousness this field is not applicable.</p> <p>This definition is taken from the National Intensive Care Evaluation (NICE). A national foundation (Dutch word: “stichting”) to collect intensive care data for the monitoring and improvement of the quality of intensive care in the Netherlands.</p> <p><i>Stichting-NICE</i>  <a href="https://stichting-nice.nl/dd/#904">https://stichting-nice.nl/dd/#904</a> (Dutch website)</p>
<b>Dementia</b>	<p>“Dementia is a syndrome – usually of a chronic or progressive nature – in which there is deterioration in cognitive function (i.e. the ability to process thought) beyond what might be expected from normal ageing. It affects memory, thinking, orientation, comprehension, calculation, learning capacity, language, and judgement. Consciousness is not affected. The impairment in cognitive function is commonly accompanied, and occasionally preceded, by deterioration in emotional control, social behaviour, or motivation.” Causes include: vascular, Alzheimer disease, Parkinson’s disease, presenile, senile, Lewy body, alcoholic, primary degenerative, Huntington’s disease, Creutzfeldt-Jakob disease, drug-induced dementia, Pick’s disease and other diseases that cause degeneration of the frontal lobe.</p> <p><i>World Health Organisation (WHO)</i></p>

	<p><a href="https://www.who.int/en/news-room/fact-sheets/detail/dementia">https://www.who.int/en/news-room/fact-sheets/detail/dementia</a> Elixhauser comorbidity Index ICD-10</p> <p><a href="https://journals.lww.com/lww-medicalcare/Fulltext/1998/01000/Comorbidity_Measures_for_Use_with_Administrative.4.aspx">https://journals.lww.com/lww-medicalcare/Fulltext/1998/01000/Comorbidity_Measures_for_Use_with_Administrative.4.aspx</a></p>
<b>Diabetes</b>	<p>Diabetes requiring medical treatment (insulin preparation or oral anti-diabetics) prior to ICU admission. Gravitation diabetes without treatment is not included.</p> <p>This definition is taken from the National Intensive Care Evaluation (NICE). A national foundation (Dutch word: “stichting”) to collect intensive care data for the monitoring and improvement of the quality of intensive care in the Netherlands.</p> <p><i>Stichting-NICE</i> <a href="https://stichting-nice.nl/dd/#78">https://stichting-nice.nl/dd/#78</a> (Dutch website)</p> <p>It should be noted that APACHE IV scores diabetes only for patients admitted to the ICU after coronary artery bypass graft (CABG) surgery and has diabetic hyperglycemic hyperosmolar nonketotic coma (HHNC) and Diabetic ketoacidosis added to the diagnosis list at ICU admission. The Charlson Index has separated scores for diabetes and diabetes with end organ damage. And the Elixhauser comorbidity index includes diabetes without medical treatment.</p> <p><i>Ho KM, Dobb GJ, Lee KY, Finn J, Knuiman M, Webb SAR. The effect of comorbidities on risk of intensive care readmission during the same hospitalization: A linked data cohort study. J Crit Care, 2009;24:101-107</i> <a href="https://reader.elsevier.com/reader/sd/pii/S0883944108000154?token=ED426CBE33139AD7F6AD9EC7135FE2B1230E56930B9B1C903DB17D35861BE29A23200E5F95CAE58A432B98D824FEDB44">https://reader.elsevier.com/reader/sd/pii/S0883944108000154?token=ED426CBE33139AD7F6AD9EC7135FE2B1230E56930B9B1C903DB17D35861BE29A23200E5F95CAE58A432B98D824FEDB44</a></p>
<b>Hematological malignancy</b>	<p>Tumors of the hematopoietic and lymphoid tissues including all myeloid neoplasms, chronic and acute leukemia, MyeloProliferative Neoplasms (MPN), lymphoma, myeloma, histiocytic and mature T/NK neoplasms.</p> <p><i>According to: Vardiman JW, Thiele J, Arber DA, Brunning RD, Borowitz MJ, Porwit A, Harris NL, Beau Le MM, Hellström-Lindeberg E, Tefferi A, and Bloomfield CD. The 2008 revision of World Health Organisation (WHO) classification of myeloid neoplasms and acute leukemia: rationale and important changes.</i> <a href="https://ashpublications.org/blood/article/114/5/937/103719/The-2008-revision-of-the-World-Health-Organization">https://ashpublications.org/blood/article/114/5/937/103719/The-2008-revision-of-the-World-Health-Organization</a></p>
<b>Immunodeficiency</b>	<p>“The patient has received therapy that suppresses resistance to infection (e.g., immunosuppression, chemotherapy, radiation, long term or recent high dose steroids, or has a disease that is sufficiently advanced to suppress resistance to infection, e.g., leukemia, lymphoma, AIDS)”</p> <p><i>Ho KM, Finn J, Knuiman M, Webb SAR. Combining multiple comorbidities with Acute PhysiologyScore to predict hospital mortality of critically ill patients: a linked data cohort study. Anaesthesia, 2007;62:1095-1100</i> <a href="https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1365-2044.2007.05231.x">https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1365-2044.2007.05231.x</a></p>

<b>Intracranial pressure</b>	<p>Head injury, meningitis, hematomas, vein obstruction, thrombosis, brain tumor, edema, contusions or abscesses can increase the intracranial pressure and add extra comorbidity to the condition of the intoxicated patient.</p> <p>This definition only applies to patients that need at least 1 hour of continuous intracranial pressure monitoring with a intraventricular, intraparenchymal, subarachnoidal, subdural or epidural catheter during one doctor's service (ICU-admission) until two hours of ICU-admission.</p> <p>If a catheter is used only for the drainage of fluid or pressure has been measured once during a lumbar puncture this field is not applicable.</p> <p>This definition is taken from the National Intensive Care Evaluation (NICE). A national foundation (Dutch word: "stichting") to collect intensive care data for the monitoring and improvement of the quality of intensive care in the Netherlands.</p> <p><i>Stichting-NICE</i>  <a href="https://stichting-nice.nl/dd/#563">https://stichting-nice.nl/dd/#563</a> (Dutch website)</p>
<b>Malnutrition/weight loss</b>	<p>By malnutrition/weight loss we define 'undernutrition' which includes low weight for age and micronutrient deficiencies or insufficiencies (lack of important vitamins and minerals). Malnutrition can be established by using the 'MUST' (Malnutrition Universal Screening Tool which includes information on how much % of the last body weight (&lt;5, 5-10 and &gt;10) the patient has lost unintentionally in the past 3-6 months, the Body Mass Index (BMI) (&gt;20, 18.5 – 20, &lt;18.5) and if the patient has not have had nutritional intake for &gt;5 days. Malnutrition is common amongst the elderly, and abusers of alcohol and drugs.</p> <p><i>World Health Organization (WHO)</i>  <a href="https://www.who.int/features/qa/malnutrition/en/">https://www.who.int/features/qa/malnutrition/en/</a>  MUST  <a href="https://www.bapen.org.uk/pdfs/must/must_full.pdf">https://www.bapen.org.uk/pdfs/must/must_full.pdf</a></p>
<b>Metabolic/ endocrine disease</b>	<p>Metabolic diseases caused by abnormal metabolic processes that can be congenital due to inherited enzyme abnormalities or acquired due to disease of an endocrine organ or failure of a metabolically important organ such as the liver including iron, calcium and lipid metabolism disorders, malabsorption syndromes and mitochondrial diseases.</p> <p><i>National Library of Medicine</i>  <a href="https://meshb.nlm.nih.gov/record/ui?ui=D008659">https://meshb.nlm.nih.gov/record/ui?ui=D008659</a>, Revision date: 28th of february 2018</p> <p>Endocrine diseases with symptoms (Dwarfism does not necessarily mean that the patient is experiencing sickness and requires treatment directly for the hormonal dysfunction) caused by pathological processes of the endocrine glands, and diseases resulting from abnormal level of available hormones including (apart from diabetes): Adrenal Gland diseases, Gonadal disorders, Parathyroid Diseases, Hypophyseal Disorders, Neurohypophyseal Diseases, Pituitary Gland Diseases and Posterior Pituitary Disorders.</p> <p>National Library of Medicine</p>

	<a href="https://meshb.nlm.nih.gov/record/ui?ui=D004700">https://meshb.nlm.nih.gov/record/ui?ui=D004700</a> , Revision date: 7th of July 2004
<b>Paralysis</b>	<p>Loss of motor function in one or more muscles caused by damaged nervous system (previous trauma, stroke, infection, auto immun or degenerate diseases) including Parkinson's disease, ALS, multiple sclerosis, Guillain-Barré syndrome and muscular dystrophy)</p> <p><i>Christopher &amp; Dana Reeve Foundation</i>  <a href="https://www.christopherreeve.org/living-with-paralysis/health/causes-of-paralysis">https://www.christopherreeve.org/living-with-paralysis/health/causes-of-paralysis</a></p>
<b>Primary Epilepsy</b>	<ul style="list-style-type: none"> <li>• At least two unprovoked (or reflex) seizures occurring greater than 24 hours apart.</li> <li>• One unprovoked (or reflex) seizure and a probability of further seizures similar to the general recurrence risk (at least 60%) after two unprovoked seizures, occurring over the next 10 years.</li> <li>• Diagnosis of an epilepsy syndrome <ul style="list-style-type: none"> <li>○ Epilepsy is considered to be resolved for individuals who had an age-dependent epilepsy syndrome but are now past the applicable age or those who have remained seizure-free for the last 10 years, with no seizure medicines for the last 5 years.</li> </ul> </li> </ul> <p><i>Epilepsy foundation</i>  <a href="https://www.epilepsy.com/article/2014/4/revised-definition-epilepsy">https://www.epilepsy.com/article/2014/4/revised-definition-epilepsy</a></p>
<b>Psychiatric</b>	<p>Including all mental disorders except for "addiction": depression, borderline, schizophrenia, bipolar, eating, post-traumatic stress, anxiety and neurodevelopmental disorders such as mental retardation.</p> <p><i>DSM-IV</i>  <a href="https://dsm.psychiatryonline.org/doi/full/10.1176/appi.books.9780890425596.x00D_iagnosticClassification">https://dsm.psychiatryonline.org/doi/full/10.1176/appi.books.9780890425596.x00D_iagnosticClassification</a></p>
<b>Sepsis</b>	<p>Life-threatening organ dysfunction ((acute change in) total SOFA score of &gt;2) caused by a dysregulated host response to infection (either locally or systemically). This includes any infection present (pulmonary, pancreatic, hepatic, brain, soft tissue) that is suspected to cause organ dysfunction present at ICU admission (to two hours after ICU-admission). Including e. g. dysregulated/complicated pneumonia, pancreatitis, hepatitis, endocarditis, meningitis, encephalitis infections.</p> <p><i>The Third International Consensus Definitions for Sepsis and Septic Shock (Sepsis-3)</i>  <a href="https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4968574/">https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4968574/</a></p>
<b>Severe respiratory disease with e.g. oxygen use or mechanical ventilation at home</b>	<p>Chronic restrictive or vascular disease (excluding COPD) resulting in severe exercise restriction (i.e., unable to climb stairs or perform household duties; or documented chronic hypoxia, hypercapnia, secondary polycythemia, severe pulmonary hypertension (&gt;40 mmHg), or respirator dependency.</p> <p><i>Ho KM, Finn J, Knuiman M, Webb SAR. Combining multiple comorbidities with Acute PhysiologyScore to predict hospital mortality of critically ill patients: a linked data cohort study. Anaesthesia, 2007;62:1095-1100</i>  <a href="https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1365-2044.2007.05231.x">https://onlinelibrary.wiley.com/doi/epdf/10.1111/j.1365-2044.2007.05231.x</a></p>

	<p>This definition includes e. g. pulmonary edema (cardiogenic and non-cardiogenic), pulmonary embolism, atelectasis, central hypoventilation, asthma, restrictive lung disease (fibrosis, sarcoidosis, interstitial lung diseases) myopathies, neuropathies, myasthenia gravis, atelectasis.</p> <p><i>The American Thoracic Society</i>  <a href="https://www.thoracic.org/professionals/clinical-resources/critical-care/clinical-education/mechanical-ventilation/respiratory-failure-mechanical-ventilation.pdf">https://www.thoracic.org/professionals/clinical-resources/critical-care/clinical-education/mechanical-ventilation/respiratory-failure-mechanical-ventilation.pdf</a>  <i>Zimmerman JE, Kramer AA, McNair DS, Malila FM. Acute Physiology and Chronic Health Evaluation (APACHE) IV: Hospital mortality assessment for today's critically ill patients. Crit Care Med, 2006 may;34(5):1297-1310</i>  <a href="https://journals.lww.com/ccmjournal/Fulltext/2006/05000/Acute_Physiology_and_Chronic_Health_Evaluation.1.aspx">https://journals.lww.com/ccmjournal/Fulltext/2006/05000/Acute_Physiology_and_Chronic_Health_Evaluation.1.aspx</a></p>
<b>Stroke</b>	<p>A stroke is a medical condition in which poor blood flow to the brain causes cell death. Including: Ischemic stroke, hemorrhagic stroke and transient ischemic attack (TIA).</p> <p>National Heart, Lung, and Blood Institute  <a href="https://www.nhlbi.nih.gov/health-topics/stroke">https://www.nhlbi.nih.gov/health-topics/stroke</a></p> <p>The National Intensive Care Evaluation (NICE) (a national foundation (Dutch word: "stichting") to collect intensive care data for the monitoring and improvement of the quality of intensive care in the Netherlands) has added to this condition the criterium that the stroke has taken place during ICU admission or within one hour after ICU admission.</p> <p><i>Stichting-NICE</i>  <a href="https://stichting-nice.nl/dd/#61">https://stichting-nice.nl/dd/#61</a> (Dutch website)</p>

9.2. If the patient has a second reason of ICU/HDU admission, select 'Yes'.

- If the patient has only the intoxication as primary reason for ICU/HDU admission and no other reason for admission, select 'No'.

9.2.1 If you selected '**Yes**' for Q 9.2, select the most fitting secondary reason for admission.

- If the patient needed ICU admission because of the necessity of mechanical ventilation, select 'Mechanical ventilation'.
- If the patient needed ICU admission because the patient received cardiopulmonary resuscitation (CPR) prior to ICU admission, select 'Having received a cardiopulmonary resuscitation before ICU admission'.
- If the patient needed ICU admission because of elective surgery next to the intoxication, select 'Elective surgery'.



- If the patient needed ICU admission because of multiple traumatic injuries on top of the intoxication after an accident or attack, select 'Poly-trauma'.
- If the patient needed ICU admission because the patient has suffered a traumatic injury on top the intoxication after an accident or attack that is predominantly a brain injury, select 'Brain trauma'.
- If the patient needed ICU admission because the patient has suffered a traumatic injury on top of the intoxication after an accident or attack that are predominantly burns, select 'Burns'.
- If the patient's secondary reason for ICU admission is not listed in the options provided, select 'Other'.

9.2.1.1 If you have selected '**Other**' for Q 9.2.1, this field will appear to enter/describe the other reason for ICU/HDU admission. Please specify the other second reason for ICU/HDU admission.

## Exposure

### 10. Exposure characteristics

10.1. Enter the amount of substances the patient was exposed to. The maximum amount you can enter is 20.

10.2. Select the most probable reason of exposure. If the patient has intentionally taken the substance(s), select 'Intentional'.

- If the patient has been exposed to the substance(s) unintentionally, select 'Unintentional'.

10.2.1. If you selected '**Intentional**' this field will appear. Select the most applicable reason for intentional exposure to substance(s). If it was a suicide attempt of the patient, select 'Suicide attempt'.

- If the exposure was intentional but the effects were unforeseen by lack of judgement or mistake (untested street drugs, ignorance for drug-to-drug interactions or unfavorable environmental conditions), select 'Exploratory behavior'.
- If information on the reason for intentional use is not known or available to you, select 'Unknown'.
- If the reason for intentional substance use is not listed in these options provided, select 'Other'.

10.2.1.1. If you selected '**Other**' at Q10.2.1 this field will appear. Please enter the other intentional reason of exposure here.

10.2.2. If you selected '**Unintentional**' this field will appear. Select the most applicable reason for unintentional exposure, if the accidental exposure was caused by a medication error of the patient, select the reason 'Medication error made by the patient'.

- If the unintentional exposure was caused by a medication error of the care giver (doctor, hospital, pharmacy), select 'Iatrogenic'.
- If the exposure was intentional but the effects were unforeseen by lack of judgement or a mistake (untested street drugs, ignorance for drug-to-drug interactions or unfavorable environmental conditions), select 'Exploratory behavior'.
- If the reason for accidental exposure is not listed with these options, select 'Other'.

10.2.2.1. If you selected '**Other**' at Q10.2.2. this field will appear. Please enter the other reason for unintentional exposure here manually.

10.3. If the time of exposure can be determined, select 'Known'.

- If the time of exposure could not be determined, select 'unknown'.
- If the time of exposure is not known but can be estimated, select 'Estimated'.

10.3.1. Please enter the time between exposure and **ICU/HDU** admission in hours.

- i. Whole numbers can be entered for whole hours. Half an hour can be given as: 0.5 and a quarter of an hour can be given as: 0.25. So for example if a patient was exposed at 14:00 and ICU/HDU admission was at 16:45, the time between exposure and ICU/HDU admission should be given as: 2.75 hours.

10.4. Table to register the categories, routes, and doses of all exposures.

Click on the "Add measurement" button in the upper right corner of the Table to open the *Table of exposures*. For each exposure answer the following questions (Q 1. to Q 2.5.) in the Table (see instructions at "**Questions in the Table of exposures**" below). If you finished answering the questions for one exposure, click the blue "Add another" button in the lower right corner of the Table to open a fresh page to fill in the answers for the next exposure. When you

finished all exposures, you can close the Table by clicking the blue "Close report" button on the left lower corner of the Table. You now see an oversight of what you entered in the *Table of exposures*. The number of rows should equal the number of exposures answered at Q 10.1 ("Number of exposures"). The questions of the *Table of exposures* are explained in the text below.

### Questions in the Table of exposures

**1.** Enter the name of exposure, for example: "Paracetamol". If the name appears in the search engine, select the right name to save it.

- If you can't find the right name, enter a synonym. The search engine contains predefined names of exposure and some of them are synonyms. For example: for Carbon monoxide you can either type in "Carbon" or "CO" and the search engine will find the term "CO / carbon monoxide".
- If you can't find the right name, try enter a few letters within the name of exposure that you are looking for. When you enter a few letters the search engine will show all names containing those letters. Click on the right name to save it.
- If the name you are looking for is not in the search engine after trying the previous described options above, type in: "**Other**". The search engine will show the option "Other", click it to save it.

**1.1.** When the option '**Other**' is saved at Q **1** of this Table, this field appears. Enter the name of exposure that wasn't listed in the search engine of Q 1 here manually.

**2.** Select the one most appropriate category of exposure. If the exposure was to medication, select 'Human medication'.

- If the exposure was to a drug of abuse such as Heroin, Cocaine, XTC, a black market drug, an experimental new drug or another "street drug", select 'Drug of abuse'.
- If there was exposure to alcohol, select 'Alcohol'.
- If the exposure was to any (household) cleaning detergent, select 'Chemical, cleaning product'.
- If the exposure was to another type of chemical including poisonous (ant poison), radioactive or corrosive substances, select 'Chemical, other'.
- If the exposure was to a gas including carbon monoxide, chlorine or laughing gas, select 'Gas'.

- If the exposure was to smoke/dust (tiny solid particles which are light enough to float in the air) or fumes (vapours/tiny liquid particles) such as zinc oxide or magnesium oxide, ammonia and formaldehyde, select 'Smoke/fumes'.
- If the exposure was to a toxic mushroom or mold/fungus, select 'Mushroom'.
- If the exposure was to plant toxins, select 'Plant'.
- If the exposure was to the poison of animals, select 'Animal'.
- If the category of exposure is not listed in the options provided, select 'Other'.
- If the category of exposure is not known or available to you, select 'Unknown'.

**2.1.** If you selected '**Animal**' for the most appropriate category at Q **2** of this Table, this field will appear. Here you can select the animal of exposure.

- If the animal is not listed in the options provided, select 'Other'.

2.1.1. If you selected '**Other**' at Q **2.1** of this Table. this field will appear. Enter the "other" animal of exposure here manually.

**2.1.** If you selected '**Other**' at Q **2** (Exposure category) of this Table, this field will appear to manually enter the "other" category of exposure (that was not listed in the options provided).

**2.2.** Select the most appropriate route of exposure.

- If the route of exposure is not listed in the options provided, select 'Other'.
- If the route of exposure is not known or available to you, select 'Unknown'.

2.2.1. If you selected '**Other**' at Q **2.3** of this Table. this field will appear. Enter the "other" route of exposure here manually.

**2.3.** Please enter the (estimated) quantity of exposure.

**2.4.** Please select the most appropriate unit to quantify the dose of exposure.

To quantify gas exposure, select 'Liters (L)'.

- To quantify alcohol exposure, select 'Unit' for unit of alcohol.

- i. One Unit alcohol: One unit equals 10ml or 8g of pure alcohol. The number of units in a drink is based on the size and alcohol strength of the drink.

The standard measure alcohol by volume (ABV) is a measure of the amount of pure alcohol as a percentage of the total volume of liquid in a drink. For example, wine has 12% ABV which means that 12% of the volume of that drink is pure alcohol.

You can work out how many units there are in any drink by multiplying the total volume of a drink (in ml) by its ABV (measured as a percentage) and dividing the result by 1,000:  $\text{strength (ABV)} \times \text{volume (ml)} \div 1,000 = \text{units}$

*For the amount of units of standard drinks see*

**Table 2.**

**Table 2. Alcohol content in units of standard drinks**

Type of drink	Number of alcohol units
Single small shot of spirits (25ml, ABV 40%)	1 unit
Alcopop (275ml, ABV 5.5%)	1.5 units
Small glass of red/white/rosé wine (125ml, ABV 12%)	1.5 units
Bottle of lager/beer/cider (330ml, ABV 5%)	1.7 units
Can of lager/beer/cider (440ml, ABV 5.5%)	2 units
Pint of lower-strength lager/beer/cider (ABV 3.6%)	2 units
Standard glass of red/white/rosé wine (175ml, ABV 12%)	2.1 units
Pint of higher-strength lager/beer/cider (ABV 5.2%)	3 units
Large glass of red/white/rosé wine (250ml, ABV 12%)	3 units

Clinical assessment between the exposure and up to 2 hours after ICU/HDU admission

## 11. Symptoms

- 11.1. Check the boxes of the gastrointestinal symptoms that are most applicable to the patient from hospital admission to 2 hours of ICU/HDU admission.
- If the patient didn't have gastrointestinal symptoms, check 'No gastrointestinal symptoms' at the bottom of the list.

- If the patient had gastrointestinal symptoms that are not listed in the options provided, check 'Other'.

11.1.1. If you checked '**Other**' at Q 11.1 this field will appear. Enter the "other" gastrointestinal symptom(s) of the patient manually.

Q 11.2 up to Q 11.6, answer in the same way as in Q 11.1.

11.6.1 Is a field where you can type any information about " Other symptom(s)" not specified in the previous lists.

11.7. Table to register at which locations the patient presented the symptoms mentioned in the previous questions.

Click the button in the upper right corner of the Table with the blue text "Add measurement" to open the *Table of symptom locations*. Please check one symptom in the Table (one of the symptoms you entered in the previous questions (Q 11.1 – Q 11.6), and check the box of the location where the patient presented that symptom. When you finished entering the location of one symptom, click the blue "Add another" button in the lower right corner of the page to repeat the steps for the location of the next symptom in a fresh page. When you finished the locations of symptoms, close the Table by clicking the blue "Close report" button on the left lower corner of the page. You can see an oversight in the *Table of symptom locations*. The number of rows should equal the number of symptoms you answered at questions (Q 11.1 – 11.6).

12. Vital functions

Enter the most deviant and clinically relevant vital signs measured from the start of intoxication and up to 2 hours after ICU/HDU admission in questions Q12.1 – Q12.6. The normal ranges are described with the information buttons: ⓘ If measurements are within the normal range, please give the FIRST values measured at ICU/HDU admission.

13. GCS

13.1. If a GCS was assessed between the start of intoxication and up to 2 hours after ICU/HDU admission and the subscores are available, select 'Yes, with subscores'.

- If the subscores are unavailable, select 'Yes, without subscores'.
- If the GCS could not be assessed because the patient was intubated and sedated, select 'No because the patient was intubated/sedated'.
- If the GCS could not be assessed because of another reason than intubation and sedation, select 'No, other reason'.

- If information on the assessment of the GCS is not known or available to you, select 'Unknown'.
  - i. In case of multiple GCSs, take the lowest GCS available.

13.1.1. If you selected '**Yes, with subscores**' at Q 13.1 this field will show. Select the eye opening score of the lowest assessed GCS between hospital presentation and the first 2 hours of ICU/HDU admission.

Answer Q 13.1.2 up to Q 13.1.3 in the same way.

13.1.5 If you selected '**Yes, without subscores**' at Q 13.1, you have to enter the lowest GCS available (only one score).

**If the patient was intubated** at the ICU or ED, please enter the **GCS before intubation**, if available.

#### 14. Lab

14.1. If lab was performed between the start of intoxication and up to 2 hours after ICU/HDU admission, select 'Yes'.

- If no lab was performed during that time, select 'No'.

14.1.1. If you selected '**Yes**' at Q 14.1 this field will show. Check the boxes of all lab tests that were performed between the start of intoxication and up to 2 hours after ICU/HDU admission.

14.1.1.1. If you selected '**Arterial blood gas**' at Q 14.1.1 this field will show. Please enter the arterial pH.

14.1.1.2. If you selected '**Arterial blood gas**' at Q 14.1.1 this field will show. Please, enter the pO<sub>2</sub>.

14.1.1.3. If you selected '**Arterial blood gas**' at Q 14.1.1 this field will show. Please, enter the pCO<sub>2</sub>.

14.1.1.4. If you selected '**Arterial blood gas**' at Q 14.1.1 this field will show. Please, enter the O<sub>2</sub> saturation.

14.1.1.5.

14.1.1.6. If you selected '**International Normalized Ratio (INR)**' at Q 14.1.1 this field will show. Please, enter the INR.

14.1.1.7. If you checked '**Electrolytes**' at Q 14.1.1, this field will show. Select the unit used for electrolytes at your department.

14.1.1.8. If you selected '**Electrolytes**' at Q 14.1.1, this field will show. Please, check the boxes of electrolytes that were determined.

- If you checked '**Sodium**' at Q 14.1.1.6, this field will show. Enter the amount of sodium measured with the lab test.
- If you checked '**Potassium**' at Q 14.1.1.6, this field will show. Enter the amount of potassium measured with the lab test.
- If you checked '**Chloride**' at Q 14.1.1.6, this field will show. Enter the amount of chloride measured with the lab test.
- If you checked '**Bicarbonate**' at Q 14.1.1.6, this field will show. Enter the amount of bicarbonate measured with the lab test.

14.1.1.9. If you checked '**Blood glucose**' at Q 14.1.1, this field will show. Select the unit used for blood glucose at your department.

14.1.1.10. If you checked '**Blood glucose**' at Q 14.1.1, this field will show. Enter the amount of glucose measured with the lab test.

14.1.1.11. If you checked '**Serum creatinine**' at Q 14.1.1, this field will show. Select the unit used for serum creatinine at your department.

14.1.1.12. If you checked '**Serum creatinine**' at Q 14.1.1, this field will show. Enter the amount of serum creatinine measured with the lab test.

14.1.1.13. If you checked '**Lactate**' at Q 14.1.1, this field will show. Select the unit used for lactate at your department.

14.1.1.14. If you checked '**Lactate**' at Q 14.1.1, this field will show. Enter the amount of lactate measured with the lab test.

14.1.1.15. If you checked '**Liver**' at Q 14.1.1, this field will show. Select the unit used for liver enzymes at your department.

14.1.1.16. If you checked '**Liver**' at Q 14.1.1, this field will show. Check the boxes of the liver enzymes that were measured in the lab test.

14.1.1.17. If you checked '**Blood toxicology screen**' at Q 14.1.1, this field will show. Select the best applicable option.

- If the blood toxicology screen was positive, select 'Yes'.
- If the blood toxicology screen was negative or unclear, select 'No'.

14.1.1.18. If you checked '**Blood toxicology screen**' at Q 14.1.1, this field will show. Select the best applicable option.



- If the blood toxicology screen changed the management or treatment of the patient, select 'Yes'.
- If the blood toxicology screen has not changed any policy for the patient, select 'No'.
- If any information on the consequences of the blood toxicology screen result is not known or available to you, select 'Unknown'.

14.1.1.19. If you checked '**Blood toxicology screen**' at Q 14.1.1, this field will show. Please enter why the result(s) of the blood toxicology screen did or did not alter the policy of the patient.

This field is optional and does not need to be filled in.

14.1.1.20. If you checked '**Urine toxicology screen**' at Q 14.1.1, this field will show. Select the best applicable option.

- If the urine toxicology screen was positive, select 'Yes'.
- If the urine toxicology screen was negative or unclear, select 'No'.

14.1.1.21. If you checked '**Urine toxicology screen**' at Q 14.1.1, this field will show. Select the best applicable option.

- If the urine toxicology screen changed the management or treatment of the patient, select 'Yes'.
- If the urine toxicology screen has not changed any policy for the patient, select 'No'.
- If any information on the consequences of the urine toxicology screen result is not known or available to you, select 'Unknown'.

14.1.1.22. If you checked '**Urine toxicology screen**' at Q 14.1.1, this field will show. Please enter why the result(s) of the urine toxicology screen did or did not alter the policy of the patient.

This field is optional and does not need to be filled in.

14.1.1.23. If you checked '**Ureum**' at Q 14.1.1, this field will show. Select the unit used for ureum at your department.

14.1.1.24. If you checked '**Ureum**' at Q 14.1.1, this field will show. Enter the amount of ureum measured with the lab test.

14.1.1.25. If you checked '**White blood cell count (WBC)**' at Q 14.1.1, this field will show. Select the unit used for WBC at your department.

14.1.1.26. If you checked '**White blood cell count (WBC)**' at Q 14.1.1, this field will show. Enter the WBC result from the lab test.

14.1.1.27. If you checked '**Platelet count**' at Q 14.1.1, this field will show. Select the unit used for platelet count at your department.

14.1.1.28. If you checked '**Platelet count**' at Q 14.1.1, this field will show. Enter the platelet count result from the lab test.

14.1.1.29. If you checked '**Hemoglobin**' at Q 14.1.1, this field will show. Select the unit used for hemoglobin at your department.

14.1.1.30. If you checked '**Hemoglobin**' at Q 14.1.1, this field will show. Enter the amount of hemoglobin measured with the lab test.

14.1.1.31. If you checked '**Bilirubin**' at Q 14.1.1, this field will show. Select the unit used for bilirubin at your department.

14.1.1.32. If you checked '**Bilirubin**' at Q 14.1.1, this field will show. Enter the amount of bilirubin measured with the lab test.

14.1.1.33. If you checked '**Other**' at Q 14.1.1, this field will show. Enter which other lab tests have been performed and what were the results.

## 15. ECG

15.1. If an ECG (Electro Cardio Gram) was performed between the start of intoxication and up to 2 hours after ICU/HDU admission, select 'Yes'.

- If no ECG was performed between the start of intoxication and up to 2 hours after ICU/HDU admission, select 'No'.

15.1.1. If you selected '**Yes**' to Q 15.1, this field will appear. Enter date in '*dd-mm-yyyy*' and time in '*hh:mm*' of ECG assessment.

15.1.2. If you selected '**Yes**' to Q 15.1, this field will appear. Enter the Heart Rate of the ECG in beats per minute.

15.1.3. If you selected '**Yes**' to Q 15.1, this field will appear. Enter the QRS duration of the ECG in milliseconds (ms).

15.1.4. If you selected '**Yes**' to Q 15.1, this field will appear. Enter the QT-time of the ECG in milliseconds (ms).

15.1.5. If you selected '**Yes**' to Q 15.1, this field will appear. Select the most applicable option.

- If there were any abnormalities on the ECG, select 'Yes'.
- If the ECG was interpreted as normal, select 'No'.
- If any information on abnormalities regarding the ECG that has been assessed between hospital presentation to 2 hours of ICU/HDU admission is unknown or unavailable to you, select 'Unknown'.

15.1.5.1. If you selected 'Yes' at Q 15.1.5, this field will appear. Select the abnormalities that were on the ECG.

- If the abnormality on the ECG is not listed in the options provided, select 'Other'.

15.1.5.1.1. If you selected '**Intracardiac conduction abnormalities (e.g. QRS > 120 ms)**' at Q 15.1.5.1, this field will show. Select the type of intracardiac conduction abnormalities seen on the ECG.

15.1.5.1.1.1. If you selected '**AV conduction disorder**' at Q 15.1.5.1.1, this field will appear. Select the type of AV conduction abnormality seen on the ECG.

15.1.5.1.1.1.1. OPTIONAL. The answer to this question is not obligatory. If you selected 'Other' at Q 15.1.5.1.1, this field will appear. Enter the other type of AV conduction disorder manually.

15.1.5.1.1.2. If you selected '**IV conduction disorder**' at Q 15.1.5.1.1, this field will appear. Select the type of IV conduction disorder seen on the ECG that is most applicable to the patient.

15.1.5.1.1.3. If you selected '**Supraventricular rhythm disorders**' at Q 15.1.5.1.1, this field will appear. Select the type of supraventricular rhythm disorder on the ECG that is most applicable to the patient.

15.1.5.1.1.4. If you selected '**Ventricular rhythm disorders**' at Q 15.1.5.1.1, this field will appear. Select the most applicable type of ventricular rhythm disorder that was seen on the ECG.

15.1.5.1.1.4.1. OPTIONAL. If you selected '**Specific repolarization disorder**' at Q 15.1.5.1.1.4, this field will show. Enter the other repolarization disorder seen on the ECG.

15.1.5.1.1.5. If you selected '**Other**' at Q 15.1.5.1.1, this field will show. Enter the other intracardiac conduction abnormality manually in this empty field.

15.1.5.1.2. OPTIONAL. If you selected '**Other**' at Q 15.1.5.1, this field will show. Enter the other cardiac abnormality found on the ECG of the patient manually in this empty field.

16. Treatment from the start of the intoxication and up to ICU/HDU admission

16.1. Select all treatments given to the patient from the start of intoxication and up to ICU/HDU admission

- If the patient received a treatment that is not listed in the options provided, select 'Other'.

16.1.1. If you selected '**Other**' at Q 16.1, this field will show. Enter the other treatment(s) given to the patient from exposure and up to ICU/HDU admission.

16.2. Table to register the locations where the treatment were administrated. Click the button in the upper right corner of the Table with the blue text "Add measurement" to open the *Table of treatment locations*. Instructions about entering the Table of treatment locations are listed below.

### Questions of the Table of treatment locations

**1.** Select one of the treatments you entered at question 16.1 (Q 16.1).

- If the treatment was not listed in the options provided at Q 16.1, select 'Other'.

**1.1.** If you selected '**Antidote**' treatment at Q **1** of this Table, this field will show. Check the box(es) of the antidote(s) given to the patient.

- If the antidote is not listed in the options provided, select 'Other'.

**1.1.1.** If you selected '**Other**' at Q **1.1** of this Table, this field will show. Enter the other given antidote(s) manually.

- 1.2.** If you selected '**Calming medication**' at Q **1** of this Table, this field will show. Check the box(es) of calming medication given to the patient from hospital presentation to 2 hours of ICU/HDU admission.

  - If the calming medication given to the patient is not listed in the options provided, select 'Other'.
- 1.2.1.** If you selected '**Other**' at Q **1.2** of this Table, this field will show. Enter the other calming medication manually.
- 1.3.** If you selected '**Cardiopulmonary resuscitation (CPR)**' at Q **1** of this Table, this field will show. Enter the time in hours (h) that has passed between exposure and the start of CPR.

  - i. Please give whole numbers for whole hours and enter "0.5" for half an hour and "0.25" for a quarter of an hour. For example if the exposure was at 14:00 and CPR started at 15:45, enter: "1.75" hour(s).
- 1.4.** If you selected '**Vasopressors**' at Q **1** of this Table, this field will show. Select the vasopressor(s) given to the patient from hospital presentation to 2 hours of ICU/HDU admission.

  - If the vasopressor(s) given to the patient are not listed in the options provided, select 'Other'.
- 1.4.1.** If you selected '**Other**' at Q **1.4** of this Table, this field will show. Enter the other vasopressor(s) manually.
- 1.5.** If you selected '**Other**' at Q **1** of this Table, this field will show. Enter the other treatment given to the patient from hospital presentation to 2 hours of ICU/HDU admission.
- 2.** Check the box of the location where the treatment you selected has started.

  - i. When you finished entering the location of one treatment, click the blue "Add another" button in the lower right corner of the page to open a fresh page to enter the location of the next treatment. When you are finished entering the locations of all treatments in the Table, close the Table by clicking the blue "Close report" button on the left lower corner of the page. You can now see an oversight within the

Table of treatment locations. The number of rows should equal the number of treatments you selected at question 16.1 (Q 16.1).

17. Treatment given within 0-24 hours of ICU/HDU stay
- 17.1. Select all the treatments given within the first 24 hours of ICU/HDU stay; given on the first day of ICU/HDU admission.
- If a treatment that was given to the patient on the first day of ICU/HDU stay is not listed in the options provided, select 'Other'.
  - If no treatment was initiated on the first day of ICU/HDU stay, select 'None'.
- 17.1.1. If you selected '**Other**' at question 17.1 (Q 17.1), this field will show. Enter the other treatment(s) given to the patient on the first day of ICU/HDU admission manually.
- 17.2. Table to register the locations of start of treatments and duration of treatments given between 0 and 24 hours (24 hours included) after ICU/HDU admission. Click the button in the upper right corner of the Table with the blue text "Add measurement" to open *the Table of ICU/HDU treatments given within the first 24 hours of ICU/HDU stay*. Instructions for the Table are listed below.

**Questions of the Table of ICU/HDU treatments given within the first 24 hours of ICU/HDU stay**

- 1.** Select one of the treatments given to the patient between 0-24 hours after ICU/HDU admission (see answer question 17.1 (Q 17.1)).
- If the treatment is not listed in the options provided, select 'Other'.
- 1.1.** If you selected '**Oxygen supplementation with an FiO<sub>2</sub> of >0.4**' at Q **1** in this Table, this field will show. Select the type of oxygen supplementation given to the patient in the first day of ICU/HDU stay. Note that only treatments with an oxygen supplementation with an estimated FiO<sub>2</sub> of >0.4 are included.
- If the type of oxygen supplementation is not listed in the options provided at Q **1.1.**, select 'Other'
- 1.1.1.** If you selected '**Other**' at Q **1.1.**, this field will appear. Enter the other type of oxygen supplementation given to the patient <24 hours of ICU/HDU stay.

- 1.2.** If you selected '**Oxygen supplementation with an FiO<sub>2</sub> of >0.4**' at Q **1**, this table will show. The FiO<sub>2</sub> of oxygen supplementation treatments is listed within this table to help answer the next question (Q **1.3** of this Table).
- i. The FiO<sub>2</sub> is the fraction of inspired oxygen and is given as a number between 0 and 1. Natural air contains 21% oxygen which is equal to a FiO<sub>2</sub> of 0.21.
- 1.3.** If you selected '**Oxygen supplementation with an FiO<sub>2</sub> of >0.4**' at Q **1** of this Table, this field will show. Enter the highest FiO<sub>2</sub> used for oxygen supplementation.
- 1.4.** If you selected '**Ventilation with an FiO<sub>2</sub> of >0.4**' at Q **1** of this Table, this field will appear. Select the type of ventilation that was given to the patient on the first day of ICU/HDU stay (<24 hours).
- If the type of ventilation given to the patient is not listed in the options provided, select 'Other'.
- 1.4.1.** If you selected '**Other**' at Q **1.4** of this Table, this field will show. Enter the other type of ventilation (with an FiO<sub>2</sub> of >0.4) given <24 hours of ICU/HDU stay manually here.
- 1.5.** If you selected '**Ventilation with an FiO<sub>2</sub> of >0.4**' at Q **1** of this Table, this field will appear. Enter the highest FiO<sub>2</sub> used for ventilation of the patient.
- i. The FiO<sub>2</sub> is the fraction of inspired oxygen and is given as a number between 0 and 1. Natural air contains 21% oxygen which is equal to a FiO<sub>2</sub> of 0.21.
- 1.6.** If you selected '**Vasopressors**' at Q **1** of this Table, this field will appear. Select the vasopressor(s) given to the patient <24 hours of ICU/HDU stay.
- If the vasopressor given is not listed in the options provided, select 'Other'.

- 1.6.1.** If you selected '**Other**' at Q **1.6** of this Table, this field will appear. Enter the other vasopressor given to the patient <24 hours of ICU/HDU stay manually.
- 1.7.** If you selected '**Renal replacement therapy (RRT)**' at Q **1** of this Table, this field will appear. Select the type of RRT given to the patient <24 hours of ICU/HDU stay.
- If the type of RRT given to the patient on the first day of ICU/HDU stay is not listed in the options provided, select 'Other'.
- 1.7.1.** If you selected '**Other**' at Q **1.7** of this Table, this field will appear. Enter the other type of RRT manually.
- 1.8.** If you selected '**Calming medication**' at Q **1** of this Table, this field will appear. Select the type calming medication given to the patient <24 hours of ICU/HDU stay.
- If the type of calming medication given to the patient is not listed in the options provided, select 'Other'.
- 1.8.1.** If you selected '**Other**' at Q **1.8** of this Table, this field will appear. Enter the other type of calming medication given to the patient <24 hours of ICU/HDU admission manually.
- 1.9.** If you selected '**Cardiopulmonary resuscitation (CPR)**' at Q **1** of this Table, this field will show. Enter the amount of time that has passed between exposure time and the start of CPR in hours (h).
- i. Please enter hours as whole numbers, half an hour as 0.5, a quarter of an hour as 0.25. For example: If exposure time was 14:00 and start of CPR was at 15:45, enter: 1.75.
- 1.10.** If you selected '**Antidote treatment**' at Q **1** of this table, this field will show. Select the antidote that was administered <24 hours of ICU/HDU stay.
- If the antidote is not listed in the options provided, select 'Other'.
- 1.10.1.** If you selected '**Other**' at Q **1.10** of this Table, this field will show. Enter the other antidote administered to the patient <24 hours of ICU/HDU stay manually.



- 1.11.** If you selected '**Active cooling**' at Q **1** of this Table, this field will show. Select the type of active cooling that was performed on the patient <24 hours of ICU/HDU stay.
- If the type of active cooling the patient received <24 hours of ICU/HDU stay is not listed in the options provided, select 'Other'.
- 1.11.1.** If you selected '**Other**' at Q **1.11** of this Table, this field will appear. Enter the other type of active cooling manually.
- 1.12.** If you selected '**Fluid resuscitation with >1.5 L in total**' at Q **1** of this Table, this field will appear. Enter the total amount of fluid given to the patient <24 hours of ICU/HDU stay in milliliters (ml).
- 1.13.** If you selected '**Gastrointestinal decontamination**' at Q **1** of this Table, this field will appear. Select the type of gastrointestinal decontamination used on the patient <24 hours of ICU/HDU admission.
- If the type of gastrointestinal decontamination is not listed in the options provided, select 'Other'.
- 1.13.1.** If you selected '**Other**' at Q **1.13** of this Table, this field will appear. Enter the other type of gastrointestinal decontamination used on the patient <24 hours of ICU/HDU admission manually.
- 1.14.** If you selected '**Other**' at Q **1** of this Table, this field will show. Enter the other treatment given to the patient <24 hours of ICU/HDU admission manually.
- 2.** Select the location of the start of the treatment given between 0-24 hours after ICU/HDU admission.
- If the treatment given to the patient in the first 24 hours of ICU/HDU stay started at the emergency room (ER), select 'Started at the ER'.
  - If the treatment was started at the ICU/HDU, select 'Started at the ICU/HDU'
  - If the treatment given was initiated in the ambulance, select 'Ambulance'.

- If the location of start of treatment is not listed in the options provided, select 'Other'.
  - If information on the location of start of treatment given between 0-24 hours after ICU/HDU admission is not known or unavailable to you, select 'Unknown'.
3. Select a unit of time (hours, days weeks or months) to measure the duration of the treatment that was given in the first 24 hours of ICU/HDU stay (24th hour included).
  4. Enter the duration of the treatment given in the first 24 hours of ICU/HDU stay according to the units chosen in the previous question (Q 3) of this Table.

If you finished answering the questions for one treatment given between 0-24 hours after ICU/HDU admission, click the blue button that says "Add another" in the lower right corner of the Table to open a fresh page with the same questions for the next treatment. When you have finished entering all treatments given between 0-24 hours after ICU/HDU admission, close the Table by clicking the blue "Close report" button on the left lower corner of the page.

You now see an oversight in the *Table of ICU/HDU treatments given within 0-24 hours of ICU/HDU stay*. The number of rows should equal the number of treatments given for the answer to Q 17.1 ("*Which treatment(s) was/were initiated within the first 24 hours at the ICU/HDU?*").

18. Treatment given after the first 24 hours and during the rest of ICU/HDU stay
  - 18.4 Select "Yes" if the **duration of stay at ICU/HDU was shorter than 24 hours** and ignore the following questions on this page (Section 18).

If the stay at ICU/HDU was 24 hours or longer, answer the following questions on this page.

18.5 Select the treatments given after the first 24 hour and during the rest of the ICU/HDU stay.

If a treatment is given after the first day of ICU/HDU stay at the ICU/HDU that is not listed in the options provided, select 'Other'.

If you selected '**Other**' at Q 18.1., this field will show. Enter the other treatment(s) received after the first day of ICU/HDU stay at the ICU/HDU manually.

18.6 Table to register extra information on the treatments given after the first 24 hours of ICU/HDU admission (> 24 hours).

Click the button in the upper right corner of the Table with the blue text "Add measurement" to open *the Table of ICU/HDU treatments given after the first day of ICU/HDU stay*. Instructions about entering data in the Table are listed below.

**Questions in the Table of ICU/HDU treatments given after the first day of ICU/HDU stay and the rest of ICU/HDU stay**

1. Select one of the treatments given to the patient >24 hours of ICU/HDU admission (see answer Q 18.3.2).
  - If the treatment is not listed in the options provided, select 'Other'.
  
- 1.1. If you selected '**Oxygen supplementation with an FiO<sub>2</sub> of >0.4**' at Q 1 of this Table, this field will show. Select the type of oxygen supplementation given to the patient after the first day of ICU/HDU stay.
  - If the type of oxygen supplementation is not listed in the options provided at Q 1.1., select 'Other'
  
- 1.1.1. If you selected '**Other**' at Q 1.1., this field will appear. Enter the other type of oxygen given to the patient >24 hours of ICU/HDU admission manually.
  
- 1.2. If you selected '**Oxygen supplementation with an FiO<sub>2</sub> of >0.4**' at Q 1, this table will show. The FiO<sub>2</sub> of oxygen supplementation treatments is listed within this table to help answer the next question (Q 1.3 of this Table).
  - i. The FiO<sub>2</sub> is the fraction of inspired oxygen and is given as a number between 0 and 1. Natural air contains 21% oxygen which is equal to a FiO<sub>2</sub> of 0.21.
  
- 1.3. If you selected '**Oxygen supplementation with an FiO<sub>2</sub> of >0.4**' at Q 1 of this Table, this field will show. Enter the highest FiO<sub>2</sub> used for oxygen supplementation.

- 1.4.** If you selected '**Ventilation with an FiO2 of >0.4**' at Q **1** of this Table, this field will appear. Select the type of ventilation that was given to the patient from the first day of ICU/HDU stay (>24 hours).
- If the type of ventilation given to the patient is not listed in the options provided, select 'Other'.
- 1.4.1.** If you selected '**Other**' at Q **1.4.** of this Table, this field will show. Enter the other type of ventilation given >24 hours of ICU/HDU stay manually.
- 1.5.** If you selected '**Ventilation with an FiO2 of >0.4**' at Q **1** of this Table, this field will appear. Enter the highest FiO2 used for ventilation of the patient.
- i. The FiO2 is the fraction of inspired oxygen and is given as a number between 0 and 1. Natural air contains 21% oxygen which is equal to a FiO2 of 0.21.
- 1.6.** If you selected '**Vasopressors**' at Q **1** of this Table, this field will appear. Select the vasopressor(s) given to the patient >24 hours of ICU/HDU stay.
- If the vasopressor given is not listed in the options provided, select 'Other'.
- 1.6.1.** If you selected '**Other**' at Q **1.6** of this Table, this field will appear. Enter the other vasopressor given to the patient >24 hours of ICU/HDU stay manually.
- 1.7.** If you selected '**Renal replacement therapy (RRT)**' at Q **1** of this Table, this field will appear. Select the type of RRT given to the patient >24 hours of ICU/HDU stay.
- If the type of RRT given to the patient on the first day of ICU/HDU stay is not listed in the options provided, select 'Other'.
- 1.7.1.** If you selected '**Other**' at Q **1.7** of this Table, this field will appear. Enter the other type of RRT manually.

- 1.8.** If you selected '**Calming medication**' at Q **1** of this Table, this field will appear. Select the type calming medication given to the patient >24 hours of ICU/HDU stay.
- If the type of calming medication given to the patient is not listed in the options provided, select 'Other'.
- 1.8.1.** If you selected '**Other**' at Q **1.8** of this Table, this field will appear. Enter the other type of calming medication given to the patient >24 hours of ICU/HDU admission manually.
- 1.9.** If you selected '**Cardiopulmonary resuscitation (CPR)**' at Q **1** of this Table, this field will show. Enter the amount of time that has passed between exposure time and the start of CPR in hours (h).
- i. Please enter hours as whole numbers, half an hour as 0.5, a quarter of an hour as 0.25. For example: If exposure time was 14:00 and start of CPR was at 15:45, enter: 1.75.
- 1.10.** If you selected '**Antidote treatment**' at Q **1** of this table, this field will show. Select the antidote that was administered >24 hours of ICU/HDU stay.
- If the antidote is not listed in the options provided, select 'Other'.
- 1.10.1.** If you selected '**Other**' at Q **1.10** of this Table, this field will show. Enter the other antidote administered to the patient >24 hours of ICU/HDU stay manually.
- 1.11.** If you selected '**Active cooling**' at Q **1** of this Table, this field will show. Select the type of active cooling that was performed on the patient >24 hours of ICU/HDU stay.
- If the type of active cooling that the patient received >24 hours of ICU/HDU stay is not listed in the options provided, select 'Other'.
- 1.11.1.** If you selected '**Other**' at Q **1.11** of this Table, this field will appear. Enter the other type of active cooling manually.
- 1.12.** If you selected '**Fluid resuscitation with >1.5 L in total**' at Q **1** of this Table, this field will appear. Enter the total amount of fluid given to the patient >24 hours of ICU/HDU stay in milliliters (ml).

**1.13.** If you selected '**Gastrointestinal decontamination**' at Q **1** of this Table, this field will appear. Select the type of gastrointestinal decontamination used on the patient >24 hours of ICU/HDU admission.

- If the type of gastrointestinal decontamination is not listed in the options provided, select 'Other'.

**1.13.1.** If you selected '**Other**' at Q **1.13** of this Table, this field will appear. Enter the other type of gastrointestinal decontamination used on the patient >24 hours of ICU/HDU admission manually.

**1.14.** If you selected '**Other**' at Q **1** of this Table, this field will show. Enter the other treatment given to the patient >24 hours of ICU/HDU admission manually.

2. Select the location of the start of the treatment given after the first 24 hours and during the rest of the ICU/HDU stay.
  - If the treatment given to the patient >24 hours of ICU/HDU stay started at the emergency room (ER), select 'Started at the ER'.
  - If the treatment given >24 hours of ICU/HDU stay started at ICU/HDU admission (at the ICU/HDU), select 'Started at the ICU/HDU'
  - If the treatment given >24 hours of ICU/HDU stay was initiated in the ambulance, select 'Ambulance'.
  - If the location of start of treatment given >24 hours of ICU/HDU stay is not listed in the options provided, select 'Other'.
  - If information on the location of start of treatment given >24 hours of ICU/HDU stay is not known or unavailable to you, select 'Unknown'.
3. Select a unit of time (hours, days weeks or months) to measure the duration of the treatment given.
4. Enter the duration of the treatment given >24 hours of ICU/HDU stay according to the units chosen in the previous question (Q **3**) of this Table.

If you finished answering the questions for one treatment given >24 hours of ICU/HDU stay, click the blue button that says "Add another" in the lower right corner of the Table. A fresh page will open to answer the same questions for the

next treatment given >24 hours of ICU/HDU stay. When you finished entering all treatments given >24 hours of ICU/HDU stay, close the Table by clicking the blue "Close report" button on the left lower corner of the page.

You now see an oversight in the Table of ICU/HDU treatments given after the first day of ICU/HDU stay. The number of rows should equal the number of treatments that have been given for the answer of Q 18.3.2 ("*Which treatment(s) did the patient receive > 24 hours after ICU/HDU admission?*").

## 18 APACHE score during ICU/HDU stay

19.1 If an APACHE score has been assessed during the ICU/HDU stay, select 'Yes'.

- If no APACHE score has been assessed, select 'No'.

19.1.1 If you selected '**Yes**' at Q 19.1. this field will show. Select the type of APACHE score that was assessed for the patient.

- If the version of the APACHE score that was assessed is not listed in the options provided, select 'Other'.

19.1.1.1 If you selected '**Other**' at Q 19.1.1., this field appear. Enter the other version of the APACHE score that was assessed for the patient from the first 24 hours of ICU/HDU stay manually.

19.1.2 If you selected '**Yes**' at Q 19.1. this field will show. Enter the value of the APACHE score that was assessed for the patient from the first 24 hours of ICU/HDU stay.

## 20 SOFA score during ICU/HDU stay

20.1 If a SOFA score has been assessed during the ICU/HDU stay, and the sub scores are available to you, select 'Yes, with sub scores'.

- If a SOFA scores has been assessed and the sub scores are not available or unknown to you, select 'Yes, without sub scores'.
- If no SOFA score has been assessed for the patient, select 'No'.
  - i. Take the first SOFA score that has been assessed at the ICU/HDU (of the first 24 hours of ICU/HDU stay). If multiple SOFA scores have been assessed during ICU/HDU stay, take the highest SOFA score.

Q 20.1.1 up to Q 20.1.6

If you selected '**Yes, with sub scores**' at Q 20.1, this field will show. Select the category of measured PaO<sub>2</sub>/FiO<sub>2</sub> for SOFA assessment that is most applicable to the patient.

20.1.7 Here the SOFA score will be calculated automatically based on the sub scores selected in questions 20.1.1 – 20.1.6 (Q 20.1.1 – Q 20.2.6). If the sub scores are not completed, the warning "Not all values for this calculation are available (yet)" will show. Please complete the sub scores of the SOFA score.

20.1.7.1 If you selected '**Yes, without sub scores**' at Q 20.1, this field will show. Enter the total SOFA score manually (take the highest total SOFA score if multiple SOFA scores are available).

## 21. SAPS score during ICU/HDU stay

21.1 If a SAPS score has been assessed during ICU/HDU stay, select 'Yes'.

- If no SAPS score has been assessed, select 'No'.

21.1.1 If you selected '**Yes**' at Q 21.1, this field will show. Select the version of the SAPS score that has been assessed.

- i. The SAPS II score uses values from the first 24 hours of ICU/HDU stay.

The SAPS III score uses values from the first hour of ICU/HDU stay.

21.1.2 If you selected '**Yes**' at Q 21.1, this field will show. Enter the total SAPS score that was assessed at the ICU/HDU.

- i. If multiple SAPS scores were calculated, enter the highest SAPS score available from ICU/HDU stay.

## 22. Optional: Other scores

22.1 Optional. Answering this question is not obligatory. If other scores were assessed during ICU/HDU stay (e.g. Toxscore or Poisoning Severity Score (PSS)), select 'Yes'. If no other scores have been assessed at the ICU/HDU, select 'No'.

22.1.1 If you selected '**Yes**' at Q 22.1, this field will appear. This field is also optional! Enter the other score that has been assessed during ICU/HDU stay manually.



## 23. Complications during ICU/HDU stay

23.1 Check the boxes of complications that occurred during ICU/HDU stay that are most applicable to the patient. For the definitions of the here listed complications see **Table 3**.

- If the complications that occurred during ICU/HDU stay are not listed in the options provided, check the box of 'Other'.
- If no complications occurred during ICU/HDU stay, check the box of 'No complications'.

23.1.1 If you checked the box "**Other**" at Q 23.1, this field will appear. Enter the other complication(s) that occurred during ICU/HDU stay manually.

**Table 3. List of complications and their definitions**

Complication	Definition
<b>Acute liver failure</b>	<p>The patient has <math>\geq 1</math> of the next conditions:</p> <ul style="list-style-type: none"> <li>• Highest level of bilirubin from a sample taken &lt;24 hours of ICU/HDU admission (lab result can be determined &gt;24 hours): <math>\geq</math> <math>\mu\text{mol/l}</math></li> <li>• Receives artificial liver support (Molecular Adsorbents Recirculating System (MARS) or extracorporeal treatment with (pig-) hepatocytes) for <math>\geq 1</math> hour at the day of SOFA assessment.</li> </ul> <p>The first definition is used by <b>APACHE III and IV</b> and the second by the <b>SOFA score</b>.</p>
<b>Acute Kidney Injury ("severe", KDIGO stage 2 or 3)</b>	<p><b>Severe acute kidney injury</b> is defined by:</p> <ul style="list-style-type: none"> <li>- a doubling of the serum creatinine level from baseline,</li> <li>- a serum creatinine level of 4 mg per deciliter (354 <math>\mu\text{mol}</math> per liter) or more with an increase of 0.3 mg per deciliter (27 <math>\mu\text{mol}</math> per liter) from baseline,</li> <li>- or a urine output of less than 6 ml per kilogram of body weight during the preceding 12 hours." <p>(We use the KDIGO-criteria, which have also been used in a recent randomised controlled trial in the NEJM, the STARRT-AKI trial); see: <a href="https://www.nejm.org/doi/full/10.1056/NEJMoa2000741">https://www.nejm.org/doi/full/10.1056/NEJMoa2000741</a></p> </li></ul>
<b>Aspiration pneumonitis</b>	<p>"Is defined as acute lung injury after the inhalation of regurgitated gastric contents. This syndrome occurs in patient who have a marked disturbance of consciousness such as that resulting from a drug overdose, seizures, a massive stroke, or the use of anesthesia."</p> <p><a href="https://www.nejm.org/doi/pdf/10.1056/NEJM200103013440908?articleTools=true">https://www.nejm.org/doi/pdf/10.1056/NEJM200103013440908?articleTools=true</a></p>
<b>Circulatory failure</b>	<p>The patient has <math>&gt; 1</math> of the next conditions:</p> <ul style="list-style-type: none"> <li>• The lowest mean arterial pressure is <math>&lt;70</math> mmHg</li> <li>• The dopamine dosing rate is <math>\leq 5</math> <math>\mu\text{g/kg/min}</math> or the patient receives dobutamine (any dose)</li> </ul>

	<ul style="list-style-type: none"> <li>• The dosing rate of: <ul style="list-style-type: none"> <li>• Dopamine is &gt; 5 ug/kg/min OR</li> <li>• Epinephrine is ≤ 0.1 ug/kg/min OR</li> <li>• Norepinephrine is ≤ 0.1 ug/kg/min</li> </ul> </li> <li>• The dosing rate of: <ul style="list-style-type: none"> <li>• Dopamine is &gt; 15 ug/kg/min OR</li> <li>• Epinephrine is &gt; 0.1 ug/kg/min OR</li> <li>• Norepinephrine is &gt; 0.1 ug/kg/min</li> </ul> </li> </ul> <p>This definition is used in the <b>SOFA score</b>.</p>
<b>Coma</b>	<p>Unarousable unresponsiveness due to trauma, cerebrovascular disease, intoxications, infections, seizures and metabolic derangements. A patient with a GCS of ≤8 is considered to be in a (severe) coma.</p> <p>This definition is also used by the <b>SOFA score</b>.  <a href="file:///H:/Downloads/3-s2.0-B9780323052269500116-main.pdf">file:///H:/Downloads/3-s2.0-B9780323052269500116-main.pdf</a>  <a href="https://medicinainternaelsalvador.com/wp-content/uploads/2017/09/Plum-and-Posners-Diagnosis-of-Stupor-and-Coma.pdf">https://medicinainternaelsalvador.com/wp-content/uploads/2017/09/Plum-and-Posners-Diagnosis-of-Stupor-and-Coma.pdf</a></p>
<b>Hospital acquired infection</b>	<p>“Also known as “nosocomial infection”, is an infection occurring in a patient during the process of care in a hospital or other health care facility which was not present or incubating at the time of admission. A hospital acquired infection can affect patients in any type of setting where they receive care and can also appear after discharge”.</p> <p><b>WHO (World Health Organisation)</b>  <a href="https://www.who.int/gpsc/country_work/burden_hcai/en/">https://www.who.int/gpsc/country_work/burden_hcai/en/</a></p>
<b>Hypoxic-ischemic brain injury</b>	<p>Neuronal cell death after prolonged hypoxia (happens most often after cardiac arrest/cardiopulmonary resuscitation)</p> <p><a href="https://link.springer.com/content/pdf/10.1007/s00401-009-0509-0.pdf">https://link.springer.com/content/pdf/10.1007/s00401-009-0509-0.pdf</a>  <a href="file:///H:/Downloads/1-s2.0-S0196064416304656-main.pdf">file:///H:/Downloads/1-s2.0-S0196064416304656-main.pdf</a>  <a href="https://www.nejm.org/doi/pdf/10.1056/NEJMoa012689?articleTools=true">https://www.nejm.org/doi/pdf/10.1056/NEJMoa012689?articleTools=true</a></p>
<b>Respiratory failure</b>	<p>If the patient has a PaO<sub>2</sub>/FiO<sub>2</sub> ratio of &lt;200 and is mechanically ventilated &lt;24 hours of ICU/HDU stay.</p> <p>This definition is used in the <b>SOFA score</b>.</p>

#### 24. Vital status at hospital discharge

24.1 Select the vital status of the patient at hospital discharge. If the patient was alive at hospital discharge, select 'Alive'.

- If the patient died at the ICU/HDU, select 'Deceased at ICU/HDU'.
- If the patient died at another ward after being discharged from the ICU/HDU, select 'Deceased at the ward following ICU/HDU discharge'.

24.1.1 If you selected '**Alive**' at Q 24.1, this field will show. Select the location of the patient after ICU/HDU discharge.

- If the location of the patient after ICU/HDU discharge is not listed in the options provided, select 'Other'.

24.1.1.1 If you selected '**Other**' at question 24.1.1, this field will show. Enter the other location of the patient after ICU/HDU discharge manually.

24.1.2 If you selected '**Diseased at the ICU/HDU**' or '**Deceased at the ward following ICU/HDU discharge**' at Q 24.1, this field will show. Select the most applicable time unit to quantify the time between ICU/HDU admission and death.

24.1.3 If you selected '**Deceased at the ICU/HDU**' or '**Deceased at the ward following ICU/HDU discharge**' at Q 24.1, this field will show. Enter the amount of time passed between ICU/HDU admission and death in units (chosen in the previous question (Q 24.1.2.)).

24.1.4 If you selected '**Deceased at ICU**' or '**Diseased at the ward following ICU/HDU discharge**' at Q 24.1, this field will show. Check the boxes of the conditions that were the causes of death.

- If the cause of death of the patient is not listed in the options provided, select 'Other'

24.1.4.1 If you selected '**Other**' at Q 24.1.4, this field will show. Enter the other cause of death within the open field manually.

24.1.4.2 If '**Life sustaining-care withheld**' isn't selected at Q 24.1.4, this field will show. If life sustaining-care was withheld, but not the cause of death, select 'yes'.

- If life sustaining-care was not withheld at any point during the patient's hospital stay, select 'No'.

24.1.4.2.1. If you selected '**Yes**' at Q 24.1.4.2, this field will show. Select the most applicable time unit to quantify the time between ICU/HDU admission and withdrawal of life sustaining care.

24.1.4.2.2. If you selected '**Yes**' at Q 24.1.4.2, this field will show. Enter the amount of time passed between ICU/HDU admission and withdrawal of life sustaining-care in units (chosen in the previous question (Q 24.1.4.2.1)).

24.1.4.2.3. If you selected '**Yes**' at Q 24.1.4.2, this field will show. Select the treatments that were withheld. If the treatment that was withheld is not listed in the options provided, select 'Other'.

24.1.4.2.3.1. If you selected '**Other**' at Q 24.1.4.2.3, this field will show. Enter the other treatment that was withdrawn manually.

24.2 Was life sustaining care withheld or withdrawn?

**Withdrawing** – the removal of a therapy that has been started in an attempt to sustain life but is not, or is no longer, effective – and **withholding** – the decision not to make further therapeutic interventions.

24.2.1 Which treatments were withheld or withdrawn? Select one or several boxes.

24.2.1.1 Specify which treatment was withheld or withdrawn.

24.2.2 Enter a date and time of the first limitation of life sustaining treatment.

24.2.3 Automatic calculation of time. A warning will appear if the chronological order of the dates and times is not logical. In this case, please, check the dates and times you entered in the previous fields.

25. Vital status 30 days after ICU/HDU admission

25.1 Select the appropriate vital status of the patient 30 days after ICU/HDU admission.

- If information about the vital status of the patient, after having tried to retrieve it, is unknown or unavailable to you, select 'Unknown'.

End of record: *TOXIC-Europe PATIENTS*.

26. Different durations of stay at the ER, on ward, at ICU/HDU are computed.

27. End procedure: information to read. Nothing to enter.