DIANE User Manual

Version 4.8

DIANE | ICU
A BOW MEDICAL brand

DIANE | ANAESTHESIA
A BOW MEDICAL brand

DIANE | OB-GYN
A BOW MEDICAL brand

Warning

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1. Introduction

DIANE is a software suite for critical care in hospitals. Several modules are available allowing secure patient monitoring and that are catered to caregivers' needs:

- **DIANE ANAESTHESIA** enables patient monitoring from the preoperative assessment to the surgery to the recovery room.

- **DIANE ICU** enables patient monitoring in the ICU and continuous care unit.

- **DIANE OBSTETRICS** lets you monitor mums and neonates in the obstetrics unit and also women in gynaecology and family planning.

This manual explains how all the modules work to help start using the software.

The user manual can be accessed by hitting F1 on your keyboard. The help function is designed to go directly to the chapter of the manual corresponding to the tab you are in.

The **DIANE** software suite is configurable. It is therefore possible to arrange the layout, tabs and components differently.
This manual will show you the different data entry methods and the particularities of each module.

1.1 Reading the user manual

The user manual covers the different features of the **DIANE** software suite. Different parts will concern different users depending on what is present on their site.
To simplify things, read this manual as follows depending on the module you are used to working on.

- **DIANE ANAESTHESIA**:
  - Chapter 1: General information (*Introduction*)
  - Chapter 2: General framework (*General framework*). This chapter explains how to start up **DIANE** and the different data entry methods.
  - Chapter 3: **DIANE ANAESTHESIA** (*DIANE ANAESTHESIA*) which covers the preop assessment (*Selecting patient records in anaesthesia*), intraoperative and postoperative monitoring (*Intra and Postoperative*).

- **DIANE ICU**:
  - Chapter 1: General information (*Introduction*)
  - Chapter 2: General framework (*General framework*). This chapter explains how to start up **DIANE** and the different data entry methods.
  - Chapter 5: **DIANEICU** (*DIANE ICU*). This chapter deals with all the functions of the intensive care module with an emphasis on medication orders (*Medication order tab, Examples of medication orders*), on the care plan (*Care plan tab*), and on the body diagram (Body diagram).

- **DIANE OBSTETRICS**:
  - Chapter 1: General information (*Introduction*)
  - Chapter 2: General framework (*General framework*). This chapter explains how to start up **DIANE** and the different data entry methods.
  - Chapter 4: Chapter 4 (*DIANE OBSTETRICS*) deals with the entire obstetrics module. However,

pregnancy monitoring is covered in chapters 4.1 to 4.13. Chapter 4.14 deals more specifically with gynaecological monitoring (*GYNAECOLOGY RECORD*) and chapter 4.15 with family planning monitoring (*FAMILY PLANNING RECORD*).

Other chapters deal with various functionalities such as coding (*Procedure/ICD-10*) and the query tool (*QUERIES*) .

We have used the following fonts to help you read this manual:

Type of font	Refers to
DIANE ANAESTHESIA	The software suite concerned
Clinical examinations	A tab
Medical History	A component with this name
Stop button	A button labelled 'Stop'
Using DIANE on a laptop OFFLINE	Link giving direct access to a chapter

1.2 Administration and troubleshooting

At least one person is appointed to administer and manage **DIANE** to keep the database of lists up to date (create a user or multiple entry, add a drug, etc.)
Your site administrator can also help you use the **DIANE** software.
If there is an IT problem, tell your site administrator or your facility's IT department.

NB: In the event of a malfunction blocking the application, all **DIANE** applications can be closed using **DIANE MANAGER**. This avoids going through the Windows Task Manager. To do this, double-click on *DianeKiller.exe* then on the '**Stop** all **DIANE** processes' button.

CAUTION: **DIANE MANAGER** should be used only when there is no other solution as recently entered data can be lost.

1.3 Security

Access permissions are assigned to each user. Each group of users has different levels of access to the application depending on their role. There are:

- Software permissions: giving access to the various **DIANE** applications,
- Application permissions: giving access to the different application functions,
- Administrator permissions: giving access to the configuration and the different reference lists.

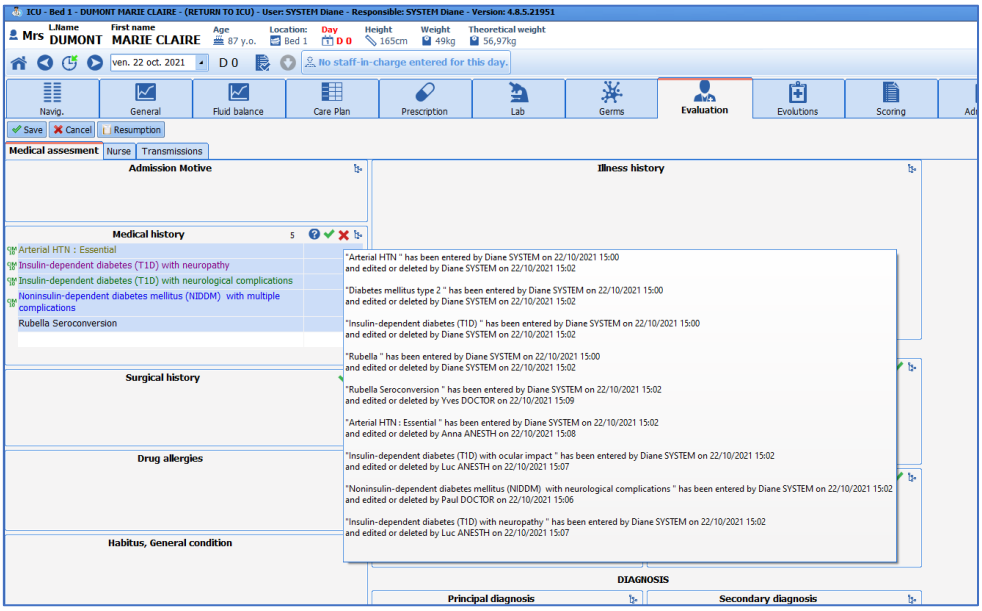
You can use the software securely if the connection is lost between the computer and the network or server. The workstations continue to save all the data on the computer and this data is sent the next time it is started up normally. This enables uninterrupted use.

1.4 Traceability in DIANE

The DIANE software tracks the data entered and who it is entered by. It is possible to view all the items entered in real time successively in the different fields by hovering over these fields.
This traceability is maintained when offline, both for data already available and data entered again.

In the application, a colour is assigned to each user who changes, adds or deletes information in a patient record.

In the screenshot below, you can see a red cross at the top right of the **Medical History** field. If you hover the mouse over this area, you can see a detailed description of all the data changed or deleted in this field. This data entry traceability is available for all fields, including free text fields.



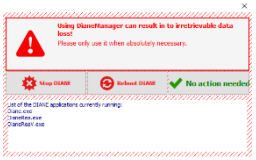
NB: There is no history for specific examinations (**Clinical examinations** tab) or configurable assessments (**Paraclinical** tab).

1.5 DIANE Manager

In the event of a malfunction blocking the application, all **DIANE** applications can be closed using **DIANE MANAGER**.

Using **DIANE MANAGER** may cause data to be lost from the relevant patient record. Ask a key user for instructions on how to use it.

This avoids going through the Windows Task Manager.



The following window opens to let you:

- Shut down **DIANE**: which forces the software to stop completely
- Restart **DIANE**: by shutting down completely then immediately restarting
- Do nothing (which allows you to close this window and go back to the portal).

1.6 Offline mode and connections between computers

The software can still be used if the server fails or the connection with the network or server is lost.
In offline mode, data provided locally by biomedical devices is still recorded. You can also create a new patient and carry out the entire related procedure.

The user can be changed in offline mode.

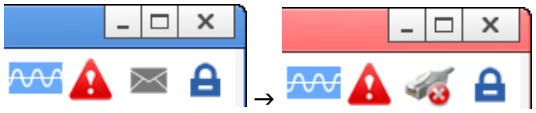
IMPORTANT: Offline mode should not be used for routine use. This mode simply avoids losing the work done when the network is disconnected. Restart **DIANE** as soon as the situation returns to normal.

NB: When the problem comes from the server, the computers will still be connected to each other. When there is a network problem, the disconnected computer will no longer have access to the other computers. The other computers in the unit will also no longer have access to the computer disconnected from the network.

1.6.1 Switch to offline mode

When you switch to offline mode, either when starting up the application or during use, you will see this message.

When you go offline, the top ribbon of the application turns red and an icon is displayed to show that you are no longer connected to the database.



1.6.2 Data resynchronization

When the network is lost, all data is stored on the primary computer.

Resynchronization is attempted when the application is closed. Resynchronization is also attempted when the patient is discharged.

On each reboot, **DIANE** tests the access to the network and sends the patient data saved locally to the central server. The data will be automatically resynchronized the next time the computer is connected.

If you switch to offline mode:

- Are the other computers in the unit also disconnected? If they are, it may be a general problem.
- Does the computer have intranet access? If it does not, there is a network connection problem.
- Has the computer been moved? Is the network cable still connected?

2. General framework

2.1 Starting up DIANE

2.1.1 User identification

To start up a DIANE application, select the application name in the **Start/Programs/Diane** menu, or double-click on the application icon on the Windows desktop.

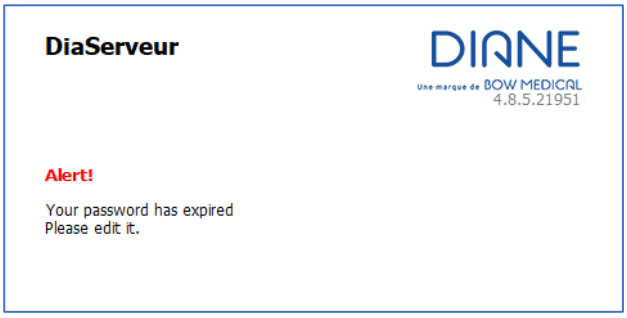
CAUTION: do not move the original executable files on the desktop.

The **Alias** on the **Login** screen contains the server references.
Do not modify the content of this field.

Enter the username and password provided by the key users.

NB: The first time you log on, you will have to enter the username. This username will then be available in the drop-down menu.

NB: When the DIANE software was commissioned at your facility, BOW MEDICAL (or your site administrator) created your username and password for you to log on to DIANE. Therefore, when you log on for the first time, a message tells you to change your password. This message will be displayed until you save a new password.
You may then be asked to change your password every year.



The **Force to offline mode** checkbox lets you start up one or more DIANE applications in offline mode. This checkbox is useful when using a laptop where there is no internet connection. It is also used when the software is updated by the key users.

2.1.1.1 Login window icons

You can change your password by clicking on the **Change password icon**.
When you click on **Change password**, the change password window opens. Enter your old password, the new one and then confirm the new password. Click on **OK** or hit **Enter** on your keyboard to save the change.
You can change your password via different paths in the DIANE application:

- Via the **Configuration** menu in the **Appointment** application,

- Via the **Options** button in the **Consultation** application, or via the specific buttons available in the DIANE Anaesthesia or DIANE ICU applications.
- Via the **?** menu in the **Queries...** application

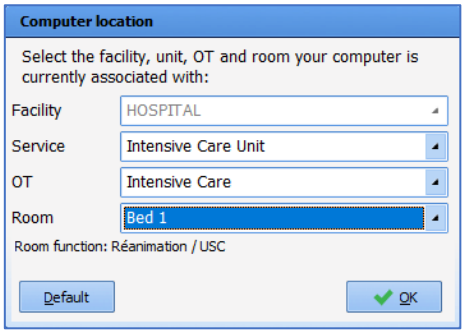
You can lock the DIANE computer by clicking on the **Lock the DIANE computer** icon.
There are different ways to lock it:

- Via the Options button in the **Consultation** application,
- Via the specific buttons available in the DIANE Anaesthesia or DIANE ICU applications,
- Via the **?** menu in the **Queries...** application

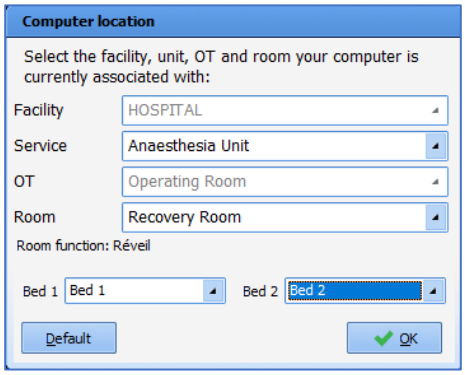
This **About…** icon shows which version of DIANE is installed on the computer. If there is a technical failure, this information will be useful to BOW MEDICAL's technical staff.

2.1.2 Computer location

When you log on for the first time, this window will prompt you to name the room in which the computer is located.



In units such as intensive care or the recovery room, one computer can manage several beds. In this case, when the computer is located you will be asked which beds are assigned to the computer.



The names **Bed 1**, **Bed 2** and **Bed 3** are just an idea of what you should enter; the choices are made using the drop-down menus.

2.1.3 Primary mode versus Mirror mode

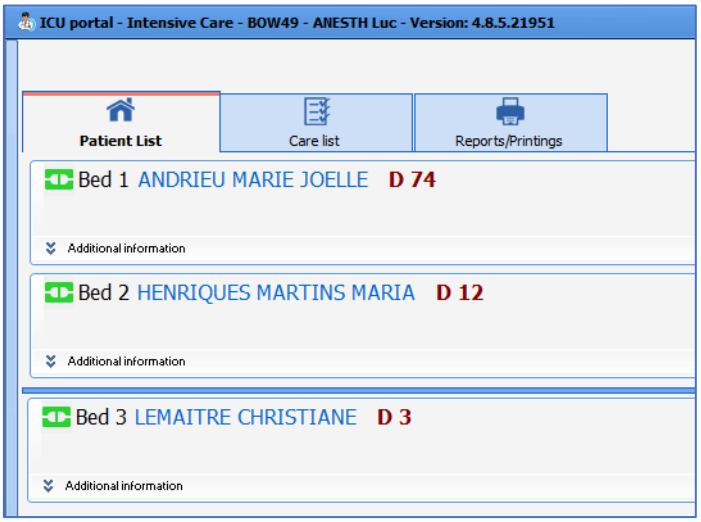
The DIANE software lets you document, log and centralize patient information. A patient's record is accessible from any computer in your unit on which the DIANE software has been installed.
The patient's record is linked to a single computer that we call the Primary computer. The Primary computer is the one that is connected to biomedical devices (often at the patient's bedside). Mirror computers are all the other computers that have access to the record.

Patients can only be admitted and discharged using the Primary computer. All of the other functions are accessible from any computer.

2.1.3.1 Direct and remote access to patient records

Direct access to a patient record means access from the Primary computer.
Remote access is access to the record from a Mirror computer.

In this illustration:

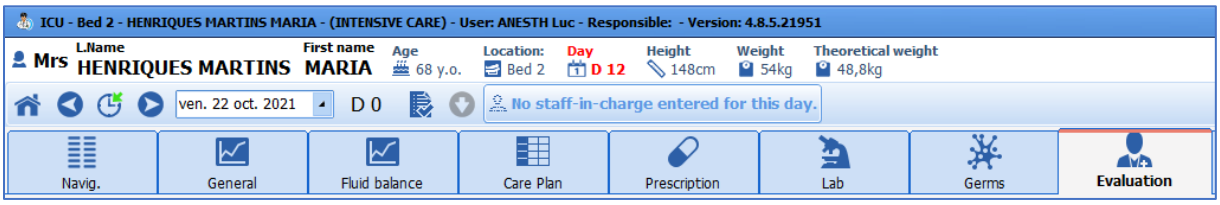


The records for ANDRIEU Marie Joelle and HENRIQUES Maria are on the Primary computer.

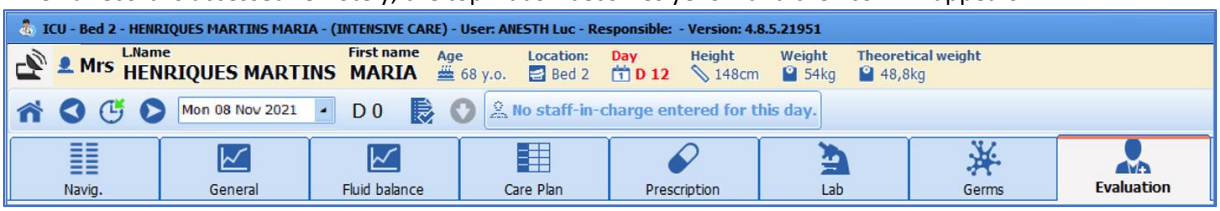
The horizontal blue line separates records managed on a Primary computer and records viewed in Mirror mode.

LEMAITRE Christiane's record is accessible in Mirror mode.

The record opened on the Primary computer appears with a top ribbon as follows:



When a record is accessed remotely, the top ribbon becomes yellow and the icon appears.



IMPORTANT: The Mirror computers give remote access to all of the unit's records and cannot be used to admit or discharge patients.

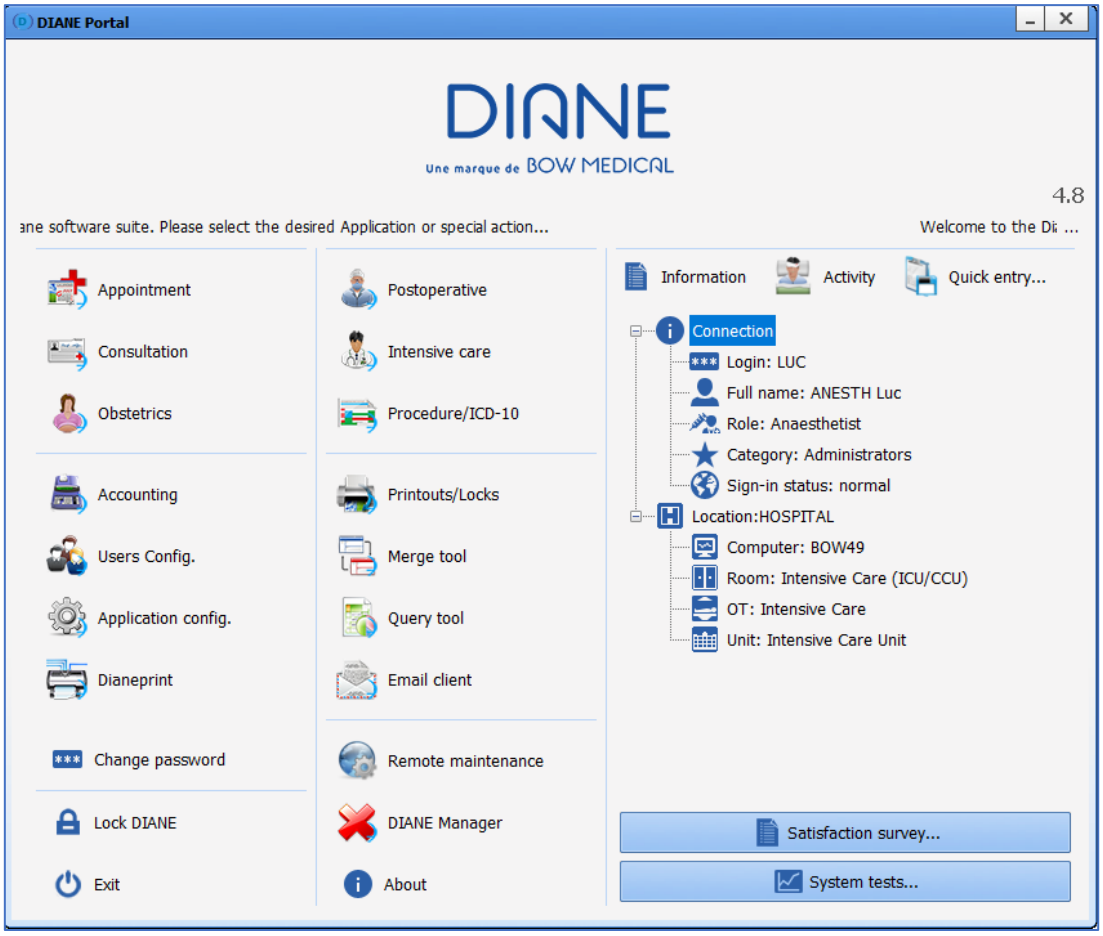
2.1.3.2 The different connection icons

- The **green icon** in front of the records means that you can work on these records.
- The **red icon** means that no communication is possible, probably because the computer in that room is switched off.
- A **yellow icon** means that a connection attempt is in progress.
- A **black icon** means that remote connection is not enabled.
- A **purple icon** means that the computer is not connected to the database.

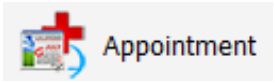
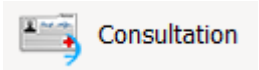
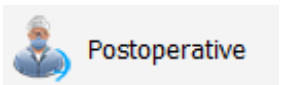
- A **blue icon** means that the Primary computer and the Mirror computer versions are not the same.

2.1.4 DIANE home page - DIANE portal

Once the user is identified and the computer's location is confirmed, the DIANE portal opens. This portal provides access to the various functions through a system of buttons / shortcuts.



2.1.4.1 Home page icons

Buttons	Function
	Gives access to DIANE APPOINTMENTS. See the **Appointment management** chapter for information on how to use the application.
	Gives access to the **Preoperative assessment** module in DIANE ANAESTHESIA. See the **Preoperative assessment** chapter for information on how to use the application.
	Gives access to the **Intraoperative** and **Postoperative** modules in DIANE ANAESTHESIA. If the computer is configured in an operating theatre, the **Intraoperative** button will be visible. If the computer is configured in a recovery room, the **Postoperative** button will be visible. See the **Intraoperative** and **Postoperative** chapters for information on how to use the application.

Obstetrics	Gives access to **DIANE OBSTETRICS**. See **Obstetrics** chapters for information on how to use the application.
Intensive care	Gives access to **DIANE ICU**. See chapter on **Intensive care** for information on how to use the application. If the computer is not configured in an ICU/CCU, the **Patient list** button will be visible.
Accounting	Gives access to the **DIANE ACCOUNTING** form. See the **Accounting** chapter for information on how to use the application. It can be linked to an **Accounting** tab of the consultation. See the **Accounting tab** chapter for information on how to use the application.
Email client	Gives access to the **DIANE MESSAGING** to send messages between computers. See the **DIANE Messaging** chapter for information on how to use the application.

Activity	Lets you view surgeries that were finished or in progress over the last 24 hours (surgeries in progress, patients released from the operating theatre and currently in transit, patients in the recovery room, surgeries finished in the last 24 hours, patients being transferred from the recovery bed).
Information	Lets you see the identity of the person logged on and locate the computer you are working on.
Quick entry...	Lets you use queries to group patients according to criteria corresponding to patient record contents.

Procedure/ICD-10	Gives access to the Entry form for **ICD-10 and procedure codes**. See the **Procedure/ICD-10 codes** chapter for information on how to use the application.
Users Config.	Lets you configure users, access permissions and the site. This tool is for key users only.
Application config.	Lets you configure users, access permissions and the site. This tool is for key users only.
Dianeprint	Gives access to the **DIANE PRINT** application.
Printouts/Locks	Gives access to the print and lock manager. This tool is for key users only.
Merge tool	Gives access to the **Record merge tool**. This tool is for key users only.

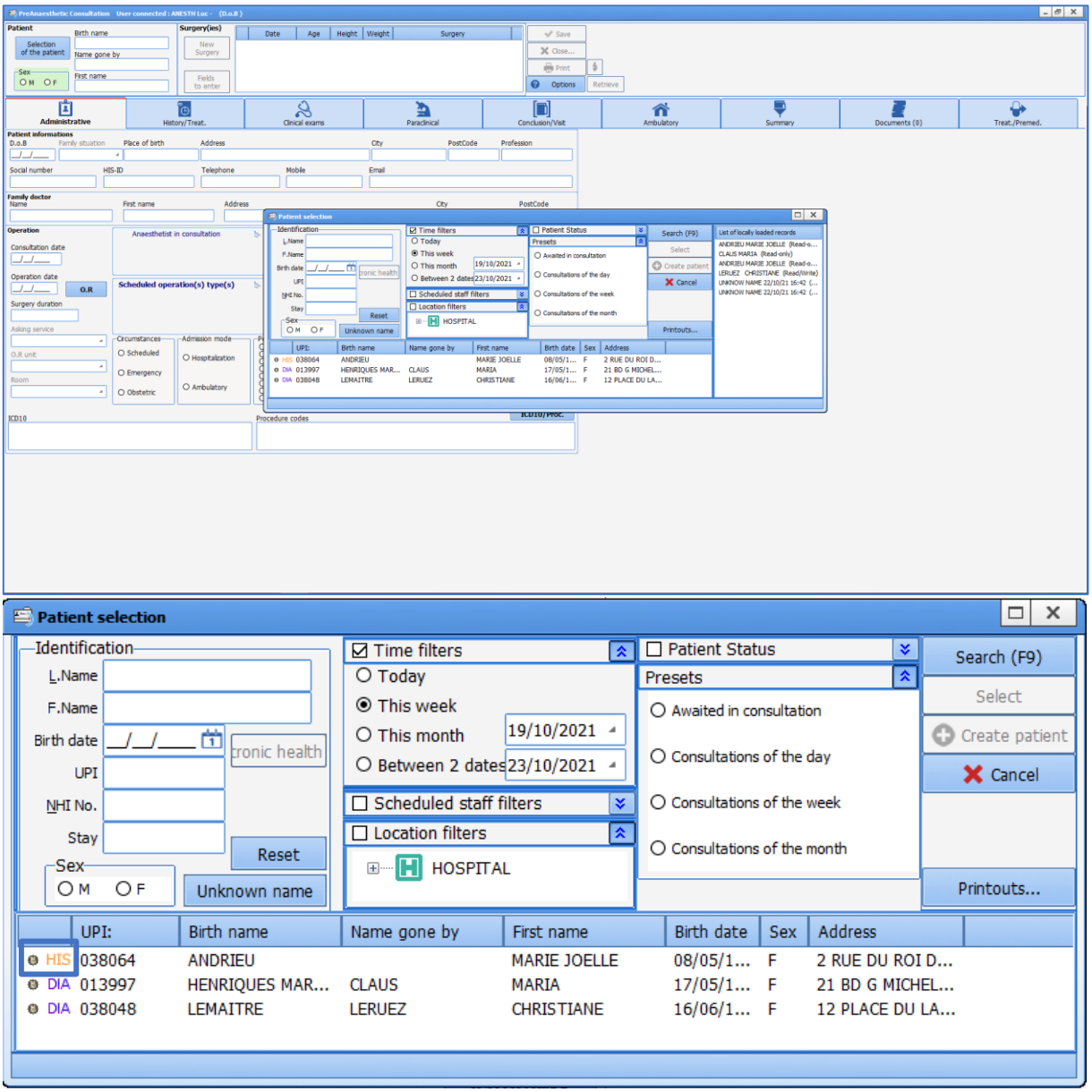
Query tool	Lets you search the database. This tool is for key users only.

Diane Manager	Gives access to **DIANE MANAGER** to close all **DIANE** applications.
Change password	Lets you change the password of the logged-in user.
Lock DIANE	Lets you lock the **DIANE** computer.
About	Lets you see the installed version of **DIANE**.
Remote maintenance	Gives direct access to the remote maintenance web page to give **BOW Medical** control of your computer via the Internet. Your IT department may require you to use another tool.
Exit	Lets you exit the **DIANE** application.

NB: Some buttons may be greyed out. This happens when they are unavailable (insufficient user permissions or offline mode for example).

2.1.5 Patient selection

When starting up an application module, the patient selection window opens automatically.



This window lets you select the patient whose record you wish to open.

The area located at the top left of the window is used to automatically search for a patient in both **DIANE** (DIA) and the Hospital Information System (HIS). This search can be done using the last name and/or married name. The search can also be done using the date of birth. After typing the first letters of the last name and/or first name, the list of all patients matching the search appears.

Each line corresponds to a patient matching the search criteria. At the beginning of each line, a pictogram gives information about the patient record. The list of pictograms is detailed in the '*Patient list icons*' chapter. If you hover the mouse over a patient in the list you will see more information (types of surgeries scheduled and carried out with surgery start and end times, etc.).

Once you have found the patient, select the patient record line then click on the Select button or double-click on their name.

If the patient has not been registered in the software and their administrative admission could not be done, you can create this patient. The procedure is described in the chapter '*Patient record does not exist*'.

PLEASE NOTE: Some preset fields can let you display patients without having to enter additional information (for example a patient expected in the recovery room).
Selection filters can be enabled by default and/or manually. They will be detailed in the following chapters.

IMPORTANT: Patients must be admitted from the Primary computer.

2.1.5.1 The specific buttons of the Patient selection window

The **Reset** button is used to erase data inserted in the different fields in this area.

The **Unknown name** button lets you enter a fictitious last name (UNKNOWN NAME) and first name (Current date and time) to quickly create a patient who has not yet been identified.

The **Printouts** button displays a menu that lets you do different tasks including:
- Printing the list of patients selected in this window (UPI, Last name, Married name, First name and Date of birth).
- If you are a key user, opening the print manager to be able to mass print all records that have been changed since they were last printed.
- Installing or removing locks on certain records (only accessible to key users).

2.1.5.2 Patient list icons

Icons appear before each name on the list in the **Patient selection** window.

Symbols	Function
APPT	Patient created in **DIANE** when an appointment is made (using the RDV.exe application). This symbol is only visible when the **Appointment made** filter located in **Patient Status** is ticked or if none of the filters are ticked. The Appt symbol will be replaced by DIA as soon as this patient's preoperative assessment has been confirmed.
EHC	Patient identified with their electronic health card. Once this patient's preoperative assessment has been confirmed, this symbol will be replaced by DIA.
HIS	Patient whose identity is registered in the Hospital Information System.
DIA	The patient's identity is registered in the **DIANE** software AND is linked to an identity in the Hospital Information System.
DIA	The identity was created in **DIANE** and is not linked to the HIS
DIA	Changes made in the HIS were not carried over to **DIANE**. When the patient record is opened, a window will prompt you to automatically update the administrative data.
DIA	The record is locked on another computer. A user is currently working on the record or this record has been preloaded onto a laptop. The record can only be opened in read-only mode. It cannot be changed. Hovering over this symbol with the mouse displays a tooltip showing the name of the user who locked this record, the date, time and the computer on which it is locked.

NB: Only a site administrator has the right to unlock one or more patient records (if a laptop is lost, for example). In this case, all data inserted during the appointment will be considered lost and cannot be recovered.

NB: If you right-click on a record you can:
- Attempt to link the patient record to an HIS identity: This option is only available for patients not linked

to an identity in the Hospital Information System. This command gives direct access to the **Record Merge** module and lets you automatically search for an HIS identity matching the patient selected.

- Load in full access mode: This option lets you load locally onto the computer all of the patient's data (consultations and surgeries) in read/write mode to be able to change the patient's data when you are offline. See the '*Using DIANE on a laptop OFFLINE*' chapter. This option places a lock on the patient in the database, preventing other users from changing the patient's data.

- Load in read-only mode: This option lets you load locally onto the computer all of the patient's data (consultations and surgeries) in read-only mode to be able to see the patient's data when you are offline. See the '*Using DIANE on a laptop OFFLINE*' chapter. This option does not place a lock on the patient in the database.

2.1.5.3 Different filters and search options

These areas in the **Patient selection** window let you refine the search based on the filters selected.
When the patient selection window opens, some filters are enabled by default. They can:
- Be opened or closed individually using the double arrows in the top right corner of the boxes.
- Be enabled or disabled using the checkboxes in the top left corner of the boxes.

2.1.5.3.1 Search options

Some of these options are based on the identification filters related to the patient's identity:

- **Unknown end** lets you search by entering only the start of the last name and/or first name
- **Unknown start** lets you search by entering only the end of the last name and/or first name
- **Ignore accents** does a search without taking into account accents in the patient's last name and/or first name.

If the first two options are ticked, you can just enter a few letters in the middle of the name.

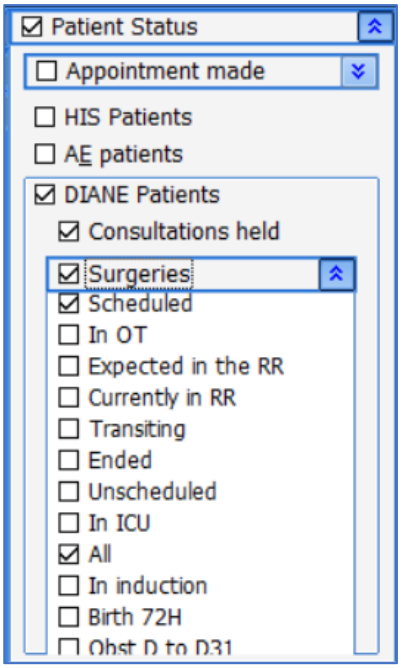
The **Word completion** checkbox updates the list of patients after just a few letters of the last name and/or first name have been inserted.

The **One-click search** box starts the search after enabling or disabling a filter.
If neither of these two options is activated, you must click on the **Search** button (or hit **F9** on your keyboard) to display the names of the patients matching the letters you have typed.

The **Deletes word completion filters** box cancels all the filters inserted as soon as the user starts to enter text in the search fields (last name, first name, etc.). This lets you search for the patient in the entire software database. This means a patient will be found even when the selection filters chosen are inappropriate.

2.1.5.3.2 Patient status filters

This area enables a search filter related to the status of the patient's record.



*** Appointment made:** corresponds to patients with an appointment scheduled through the RDV.exe application. See the *'Appointment management'* chapter.

*** HIS patients:** corresponds to patients entered through the hospital software.

*** A&E patients:** corresponds to patients who arrived in the A&E and were registered at a later stage.

*** DIANE patients**: corresponds to patients who have already had a consultation or surgery using the **DIANE** software suite.

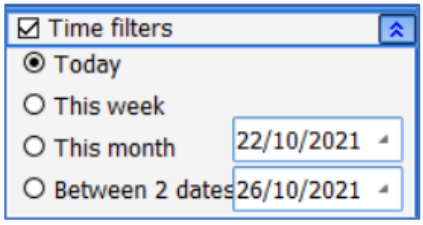
You can add restrictions for this last filter.
*** Consultations held**: lets you search for a patient who has already had a consultation in **DIANE**,

*** Surgeries** lets you search for:
- a patient who has a surgery scheduled (with a scheduled date),
- a patient who has an unscheduled surgery (no scheduled surgery date),
- a patient who is currently in the operating theatre or recovery room,
- a patient in transit between the operating theatre and the recovery room,
- a patient whose surgery has already been performed.

NB: Patient Status does not apply to patients only registered in the HIS.

2.1.5.3.3 Time filters

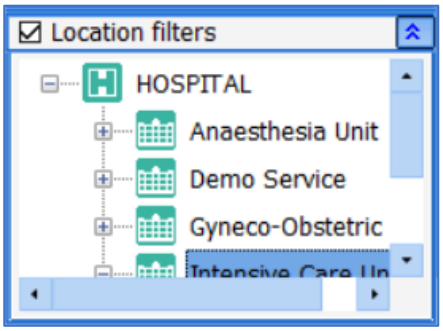
This area is used to enable a search time filter.



Time filters can be applied at the same time as the **Patient Status** filter except when **Unscheduled Surgeries** has been selected.
If the time filters are enabled and the **Patient Status** filter is not ticked, the dates automatically correspond to preoperative assessments.

NB: time restrictions do not apply to HIS patients because date-related searches are done using key dates in the **DIANE** record.

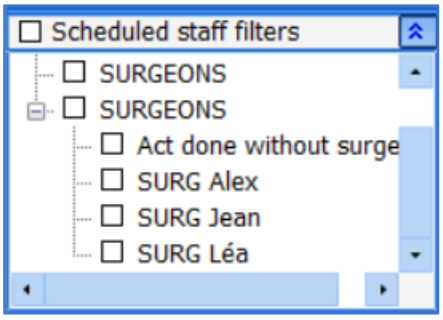
2.1.5.3.4 Location filters



This area lets you search in:

- The facility's sites,
- The entire facility,
- A unit,
- An operating theatre,
- A room, etc.

2.1.5.3.5 Scheduled staff filters



This area is used to enable a filter based on the staff scheduled to be present.
By expanding the staff categories you can limit the search to patients whose consultation or intraoperative or postoperative monitoring involves the selected staff.

When several staff members in the same category are selected, only one needs to have been entered for the search to find the record.

NB: Scheduled staff filters do not apply to patients in the HIS.

2.1.5.3.6 Presets

Presets let you search based on the status of the patient records.

This preset filter can be configured by a site administrator to be the default view.

If **Expected in Theatre** is ticked, patients scheduled for today through the Consultation will be automatically displayed.

2.1.5.4 Possible scenarios

This chapter talks about special cases.

2.1.5.4.1 The search is not specific enough

If the search is likely to retrieve too many patients, a warning message appears. The user can still launch the search by confirming in the warning window. However, the search results may take several minutes to load.

You can narrow the search results by clicking on the **No** button in the warning window in order to add .

If a patient's name is entered and filters are enabled afterwards, there may be no search results. If this is the

case, a message prompts you to disable all filters to find the patient.

2.1.5.4.2 Patient record does not exist

No patient records match the search. This can occur if the patient arrives in an emergency without an administrative admission. In this case you can create a temporary identity while they are receiving care. To do this:
Click on the **Create Patient** button after completing the mandatory **Last name** and **First name** fields or after selecting the **Unknown name** button.
The patient can receive care with this temporary identity.

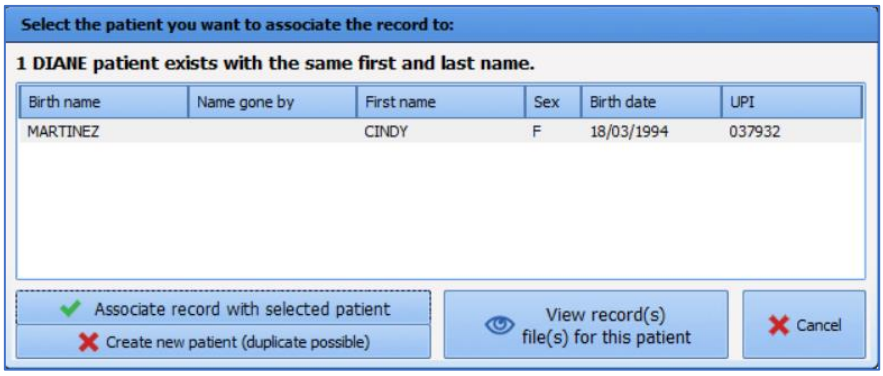
This feature can be disabled.

NB: It is vital to notify the key users when this procedure is used to subsequently link this record to the patient's administrative and hospital identity**.**

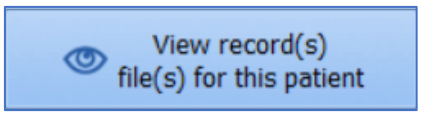
NB: Remember to check that you have entered the items correctly. You can also try searching using different information (UPI, date of birth, name, etc.).

2.1.5.4.3 The patient appearing in the list has the same name

If the patient appearing in the list is another patient with the same name :
Click on the **Create Patient** button after completing the mandatory **Last name** and **First name** fields.
When you save, an **Information** window warns you that there is at least one other patient with the same last name and first name.

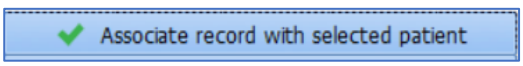


The window containing the list of patients with the same name opens. You can then link your new record to a patient who already exists.

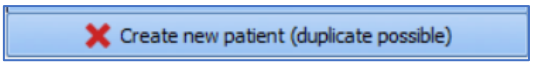


To avoid linking a record to the wrong patient, you can select the patient's consultation record and click on this button to view it:

To link the patient record to a patient who already exists, select the patient to whom you want to link the record then click on this button:



If you want to create a new patient, click on this button:



The software will then see if an HIS identity matches the new patient and will prompt you to link them.

2.1.6 Selecting a patient's record

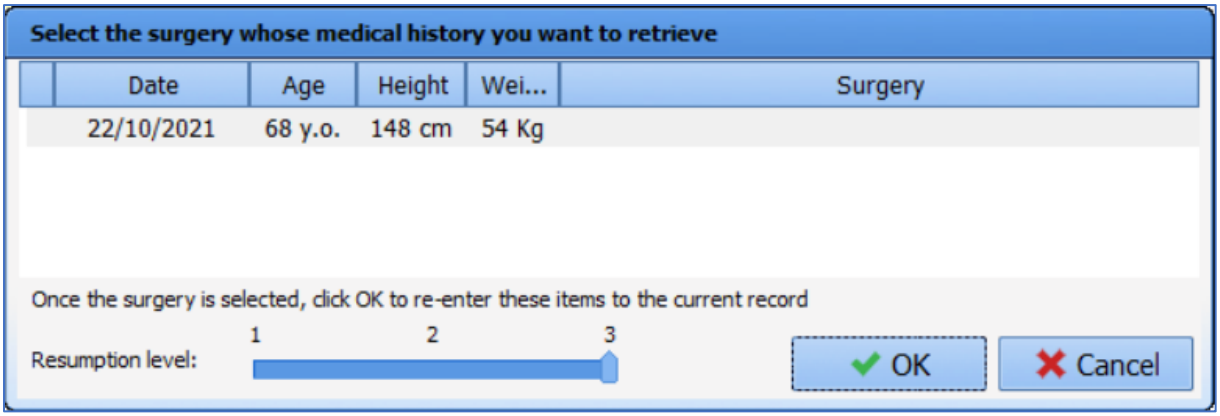
After choosing the patient as described in the '*Patient selection*' section, you must select the record concerned according to the care that will start.

As this selection depends on the unit providing the care, please refer to the relevant chapter:

- For anaesthesia: '*Selecting patient records in anaesthesia*'
- For obstetrics: '*Selecting patient records in obstetrics*'
- For the ICU: '*Selecting patient records in the ICU*'

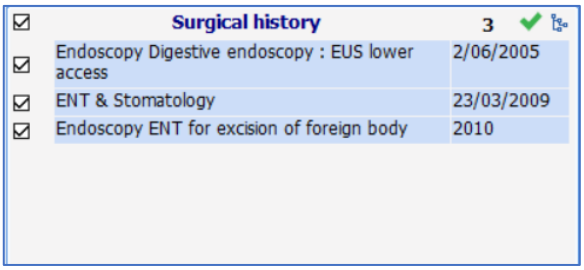
2.1.7 Retrieving information from a previous record

After creating a new record, you can retrieve certain patient data if they have a previous record in **DIANE**.



There are two ways to retrieve data from previous records:

- After confirming the ***Schedule a surgery*** window, a message offers to automatically retrieve the history from the previous record.
    - If you click on **Yes**, the **History/Treatments** tab is completed with the history from the previous record.
    - If you click on **No**, only previous surgeries and intraoperative and postoperative complications entered into the **DIANE** software will be retrieved.
- Click on the **Retrieve** button. A menu lets you retrieve information from the previous record. The proposed retrieval levels 1, 2 or 3 correspond to the number of information items you want to retrieve (3 is the maximum retrieval level).



Items retrieved automatically have a checkbox next to them. This lets you delete, change or add to the information retrieved.

The categories retrieved will depend on the configuration by the key user.

2.1.8 Patient discharge

A patient is discharged via a button in each module. There is a description of the process in the relevant chapters.

Please refer to the relevant chapter:

- For anaesthesia: '*Discharging patient records in anaesthesia*'
- For obstetrics: '*Discharging* patient records in obstetrics'
- For the ICU: '*Discharging patient records in the ICU*'.

However, please note that:

- The patient's discharge will prompt you to either transfer or close the record.

A transfer concerns a patient who will be retrieved in a **DIANE** module. (*e.g. departure from the operating theatre to the recovery room, departure from the operating theatre to the intensive care unit that has **DIANE ICU**, departure from intensive care to the operating theatre, etc.*).

A record is closed when the patient exits the **DIANE** environment.

Closing the record can automatically generate related tasks: printing the record, exporting the record to the electronic health record, etc.

2.2 Ways to enter data in DIANE

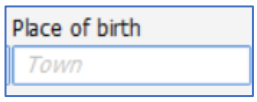
There are different ways to enter information and data in **DIANE**. The following chapters will list the different possibilities.

2.2.1 One-line input fields

This component lets you enter free text.
They may contain input prompts to guide the user. In this case, the field will only accept the type of data expected (no numbers for a town for example.)
This component accepts pasted information.

Example of input prompt:

- Greyed-out text showing the type of data expected (town in the example below)



2.2.2 Drop-down menus

If you click on this component, either on the arrow or the text box, the available options are displayed. You can click on any line in this box.

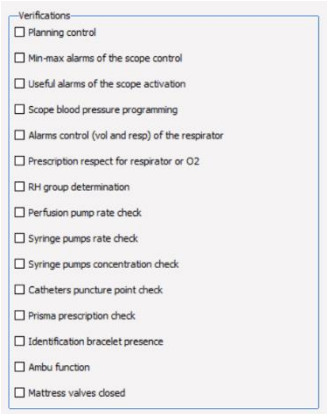
NB: You can browse through the choices offered using the up/down arrows on the keyboard.

2.2.3 Checkboxes

This feature lets you confirm information. You must use the mouse to click on it to switch from one status to another. You can also change the status of the checkbox using the space bar when the focus is on that checkbox.

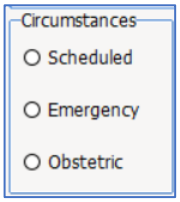
2.2.4 Checkbox groups

A checkbox group shows several choices that can be selected separately. You can therefore select several boxes in the same group.



2.2.5 Radio button groups

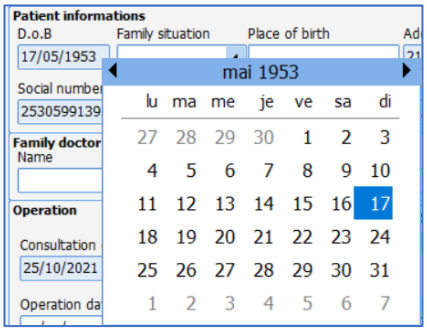
A radio button group only lets you select one item. If you click again on a radio button already selected, it will be deselected.



2.2.6 Dates and Calendar fields

The date fields let you enter a complete date in day/month/year format.
The time can also be added in __: __ format __:__ .
This field is completed either:

- By double-clicking to directly enter the current date.
- By entering the numbers in the date without spaces.
- If you hover the mouse over the field a calendar appears to select the desired date.

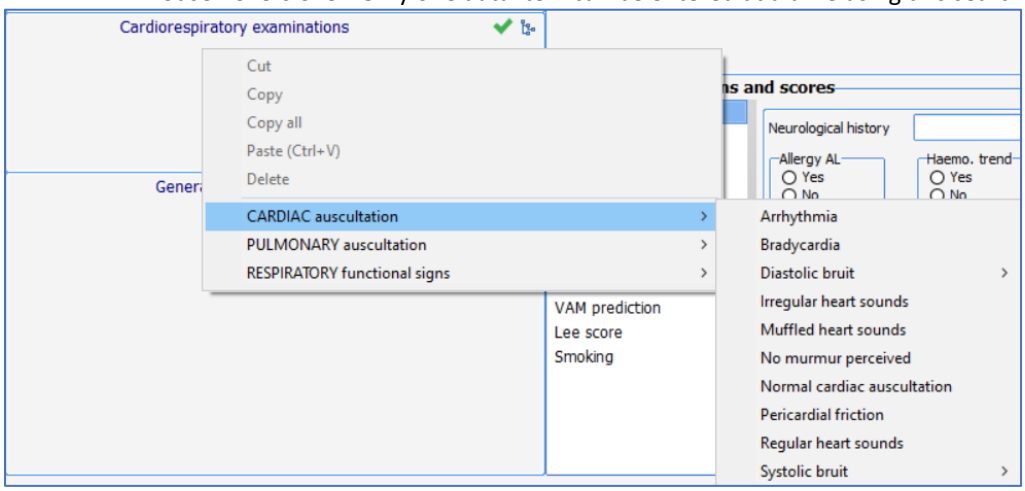


2.2.7 Input fields with a reference list

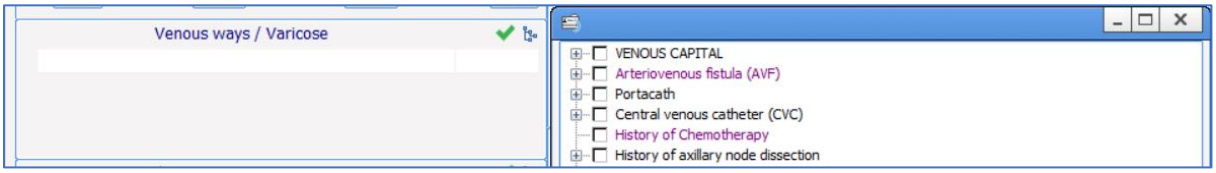
These fields let you enter information from a list and/or using free text. Free text will be used if the data sought does not already exist or to add to information.

There are three ways to access lists:

- By right-clicking in the relevant column. A list will appear. When there is an arrow at the end of the line this means that there are submenus. These are automatically displayed when the mouse hovers over. Only one data item can be entered at a time using this search mode.



- By clicking on the icon in the top right corner. A window containing the list appears. You can then tick one or more items in the list. You can display the subitems of a list by clicking on the '+' sign to the left of the lists.

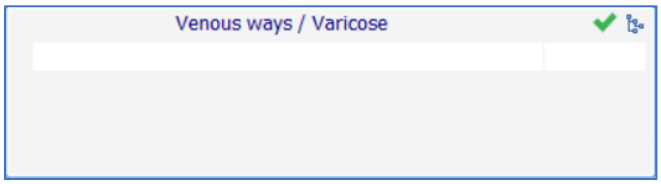


NB: some data in the list is purple. This means that the data is linked to an ICD-10 code.

- Manual entry: when you enter the first *n* letters (*n* can be configured by key users, generally 3 or 4), an automatic search will display the words recognized in the list. You can then select the desired content using the mouse.

You can access items that have not been configured for your unit but that were created for the hospital site by ticking the **View all items** box in the list display window

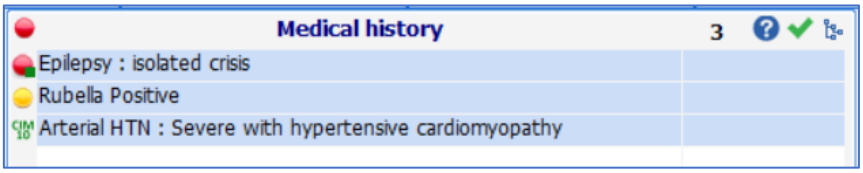
To enable free text input, simply click immediately under the title of each column and enter the desired text manually.



NB: these columns are invisible until data has been entered in them

In general:

- You can show the importance of a history item by clicking in the box on the left. This displays a red ball to show that this history item is important. If you click again in the same place a yellow ball will appear.



- You can click on to directly report that there is no significant history. For example, if you click on the green tick in the **Medical history** field, the words: 'no medical history' will appear. In each field, you can define a default value for this green tick.

  NB: It is always preferable to click on the green tick rather than not enter anything as this could suggest that the patient was not asked for this information.

- When a logo is visible at the top right, it means that only data with an ICD-10 code will be kept in the database (i.e. the data in the list that is purple).
- When there is a on the top right of a component, you can click on it for help. For example, if you click on the in the **Medical history**, you have direct access to Orphanet.

2.2.8 Buttons

Buttons have a call up function in **DIANE.**

Clicking on a button can call up:

- A contextual link: this gives direct access to other software (e.g. direct access to the laboratory or imaging software or even to the EHR).
- A detailed entry: this gives access to a consultation sheet, a score, etc.
- Printing: this gives access to a document that can be printed (e.g. consultation report, 8th day certificate, etc.).
- Multiple entries: this is a method that lets you enter a series of procedures rapidly.
- A list of events: this is available for intraoperative/postoperative monitoring and in the delivery room; certain buttons give access to a list of events
- A list of treatments: this is available for intraoperative monitoring and in the delivery room

Examples of buttons:

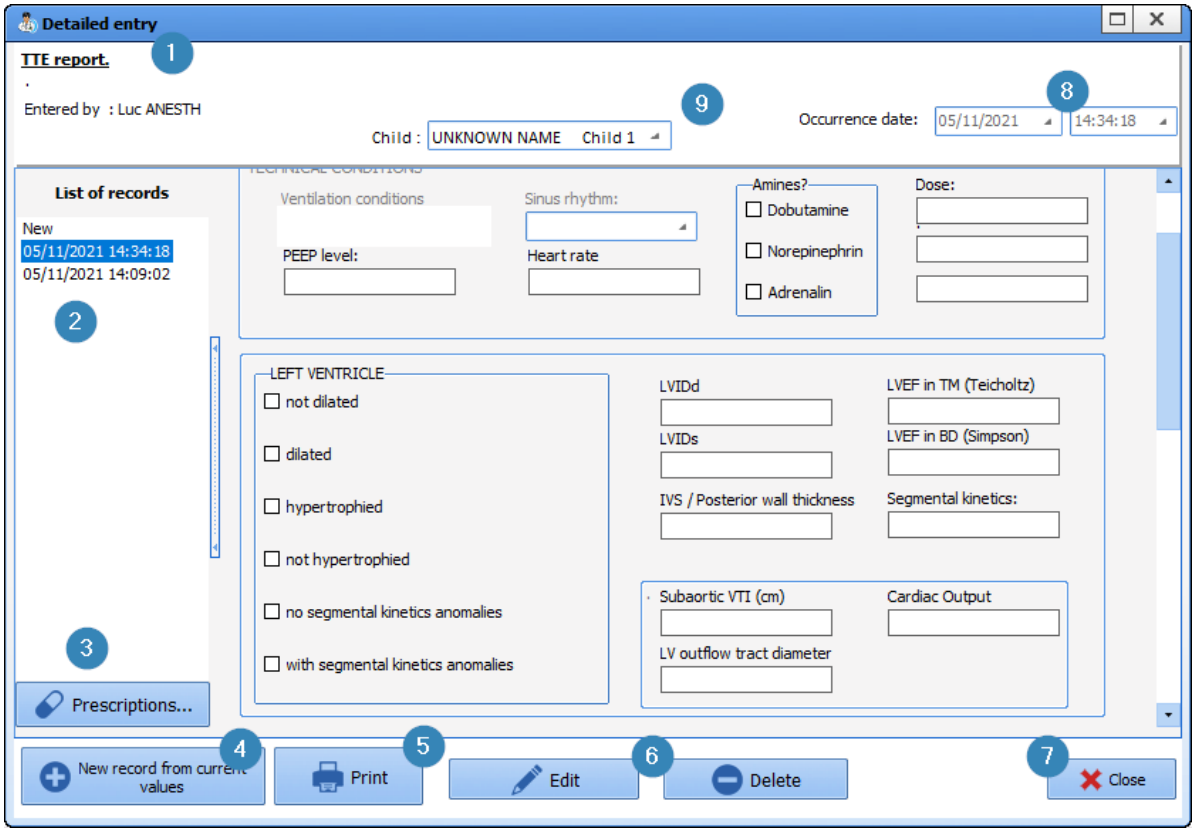
Drainage / Elimination	Located on the care plan, in the intensive care unit, this button gives access to the list of events related to drainage and elimination: placing a drain, removing a drain, fitting an indwelling urinary catheter, etc.
Glasgow	Glasgow score access button. When you click on this button a window opens for you to enter the Glasgow score.
SM Induc	Button to access multiple entries for **Induction**. Allows you to enter all the data needed to intubate a patient.

2.2.9 Detailed entries

Detailed entries are monitoring sheets accessed in different ways: detailed entry table, detailed entry display component with history, a button, menu in the 'entries' bar of the **MONITORING** tab during and after surgery, etc.
These sheets can be used in different ways depending on the situation. They can be used as a consultation sheet, score entry sheet, checklist, etc.

2.2.9.1 How detailed entries work

How it works: example of Trans-Thoracic Echography detailed entry :



1: Name of detailed entry

2: List of data registered: this column groups together all the detailed entries of the same type already registered for this file. You can view the other detailed entries by clicking on the registered data displayed in this column. If you click on **New** you can enter a new consultation. When you open a detailed entry, a new entry is displayed by default.

3: Prescription form button: lets you generate prescription forms directly from the detailed entry.

4: New record from current values: lets you open a new data entry sheet by retrieving all the data recorded in the previous detailed entry.

5: Print: lets you print the detailed entry.

NB: this button does not generate the consultation report. It prints the screen.

6: Change/Delete: lets you change a consultation sheet opened when it has already been completed and confirmed. Or simply delete it.

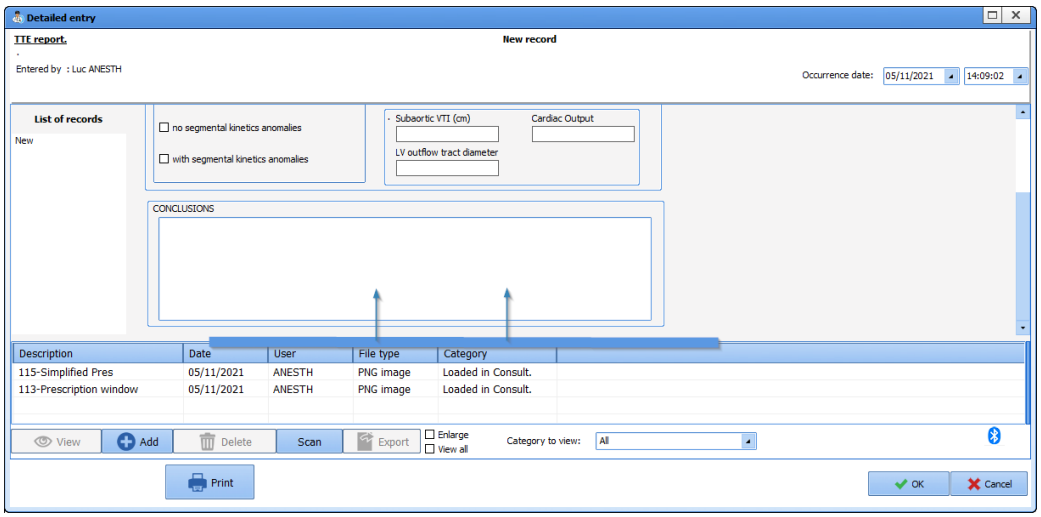
NB: A consultation sheet can only be changed by the caregiver who created it.

7: Confirm/cancel: lets you confirm or cancel the current entry.

8: Date of occurrence: lets you change the date and time of the entry (if the data was entered after the clinical examination, for example).

9: Choice of child menu: the fields outlined in dark blue are 'child' fields, i.e. they relate to data concerning the foetus. In a multiple pregnancy, you must choose another child (T2 for example for a twin pregnancy) to record the data for the examination of the second foetus. This choice is made using the drop-down menu. When you change the child, the outline of the data will change colour in the relevant fields.
NB: this menu is only available for the obstetrics module.

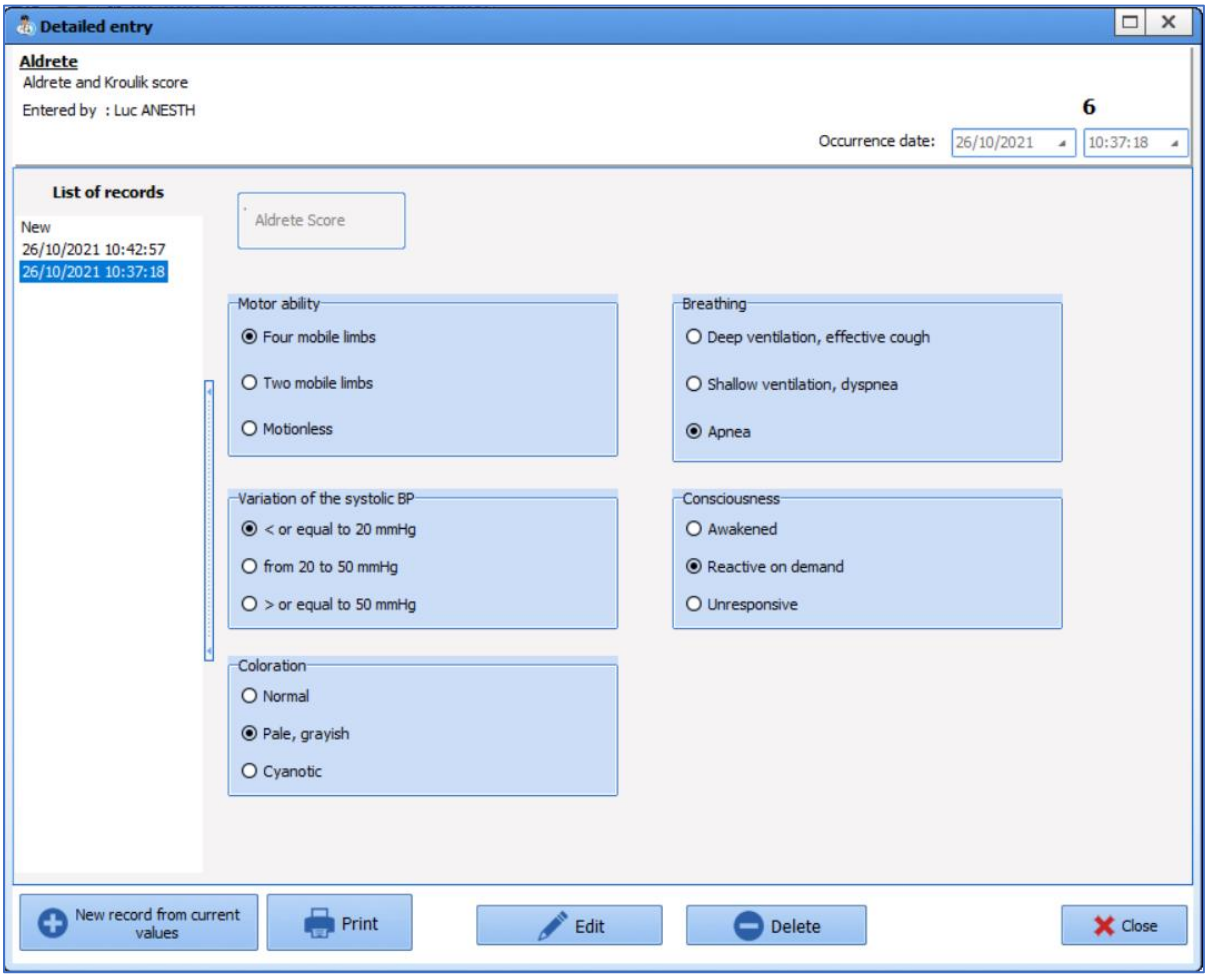
View documents: at the bottom of the detailed entry sheets is a blue bar marked with dots. If you click on this bar, a window appears containing the documents. It contains all the documents scanned, imported from other software or printed in **DIANE**.



2.2.9.2 Scores

DIANE lets you enter many different scores. These scores are accessed in the same way as detailed entries and work in a similar way.

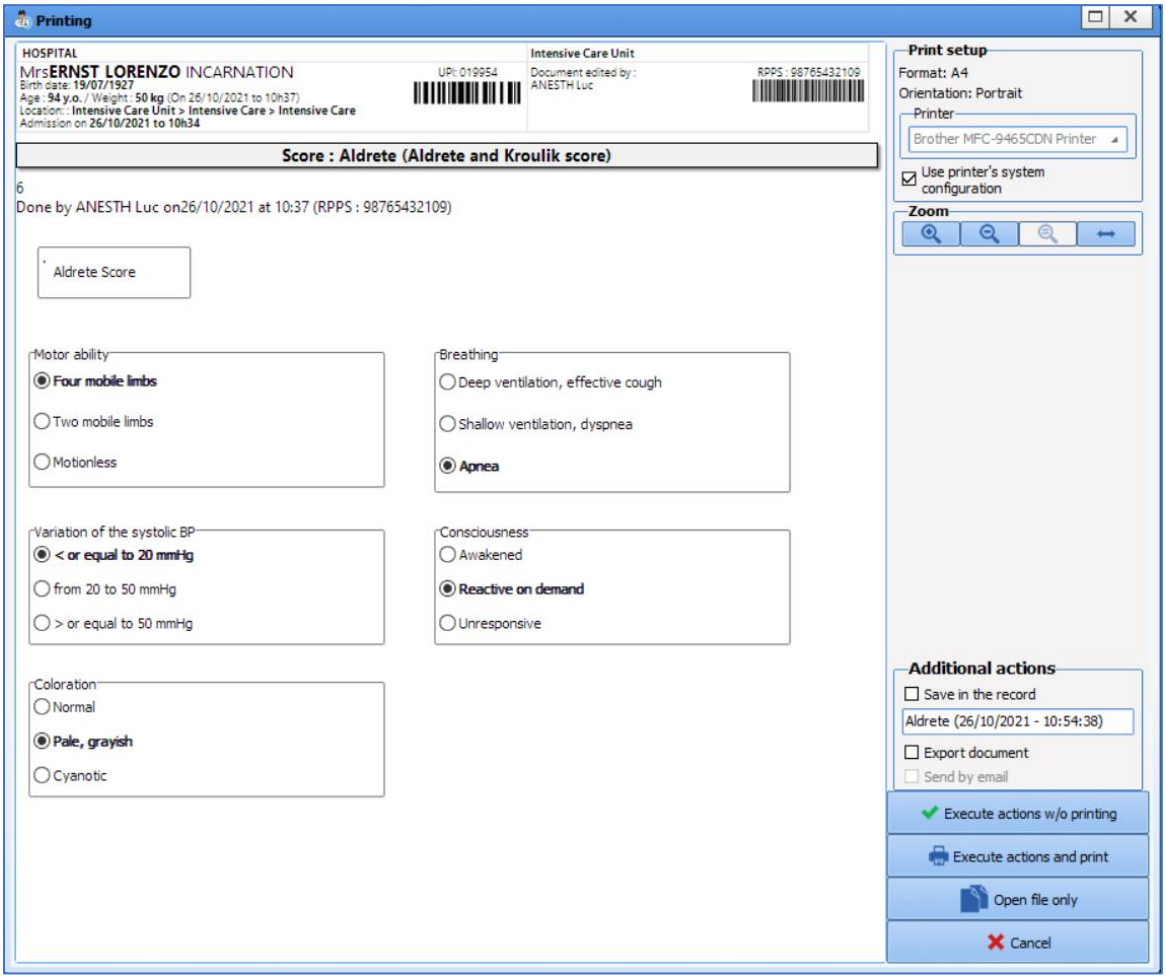
Example of the Aldrete score:



When you open the score, simply complete each of the fields required to calculate the score. Once you have finished, the score value is displayed at the top right of the data entry sheet.

NB: some scores do not result in a numerical value but some other type of data such as classification in an at-risk group. This is the case for the early onset neonatal infection score used in the **DIANE OBSTETRICS** module.

If you want to print out a score, it must be saved first. When you click on the **Print** button the following window appears.

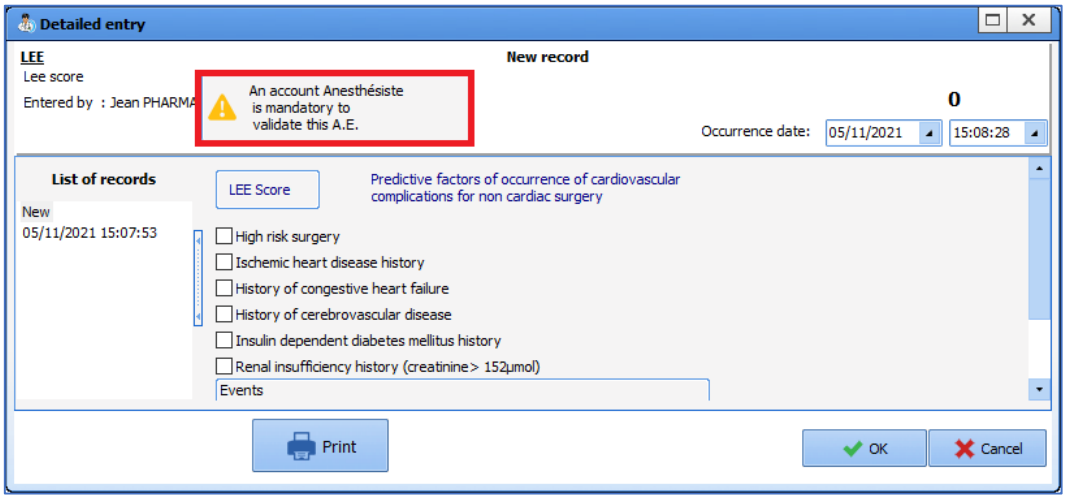


Score entries are in bold to see them more easily.

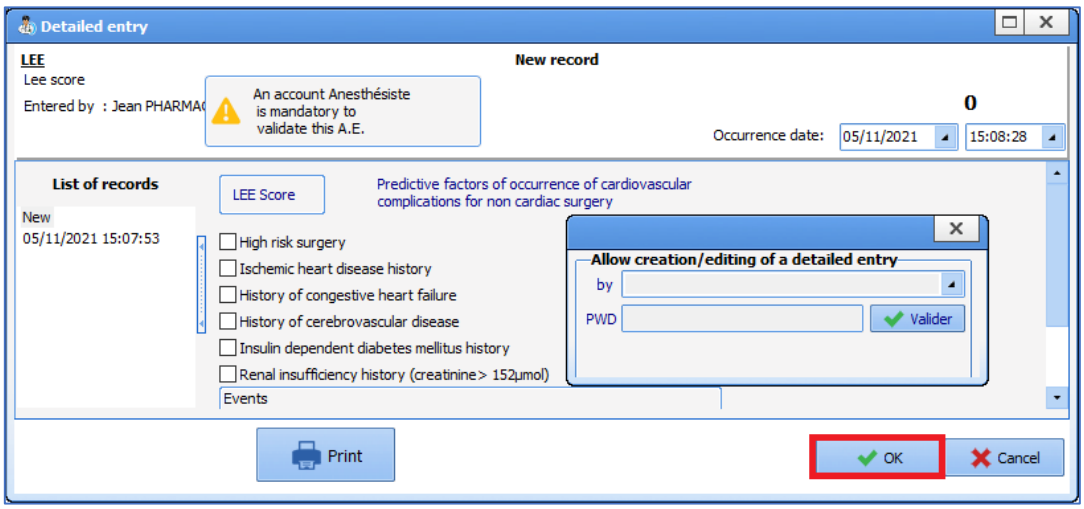
As with a form letter, you can save and/or export this document.

- **Execute actions w/o printing:** you will save and/or export the document without printing,
- **Execute actions and print:** you will save and/or export and print the document,
- **Open file only:** you will create and display a PDF of the document,
- **Cancel:** you will cancel all tasks

Some Detailed entries require the user logged on to have a certain function.



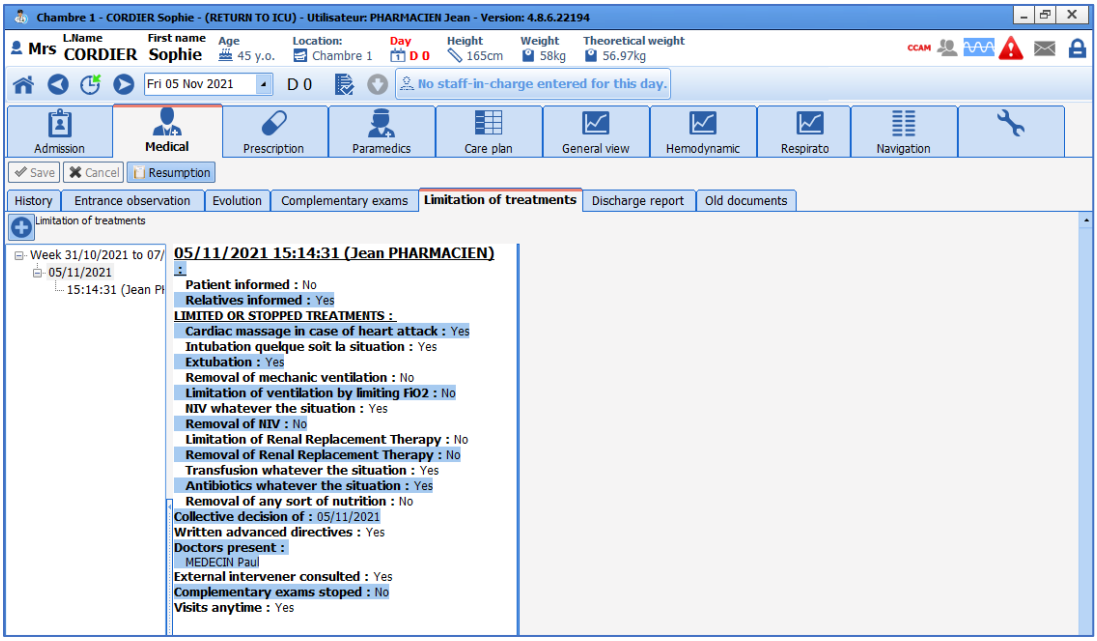
Some scores can only be entered by a given function. In the image above, a warning says that this score must be entered by an anaesthetist.



A window appears allowing the anaesthetist to enter their login and password.

2.2.9.3 Detailed entry display with History

This feature displays both the detailed entry itself and a summary of the data entered.



To add new information to the Detailed entry, click on the '+' button above the left column.
When you confirm what you have entered, it is inserted in the left column.

Left column

This column is the history of the Detailed entries recorded. You can view the different information recorded at any time by clicking on the relevant line. When you have clicked on a line in the past, the middle column and right column are updated.

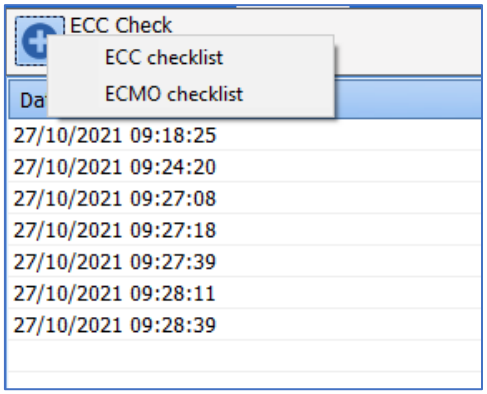
Middle column
This column displays the summary of the detailed entry selected in the history column.

Right column
This column displays the detailed entry.

2.2.9.4 Display of Detailed entries as a list

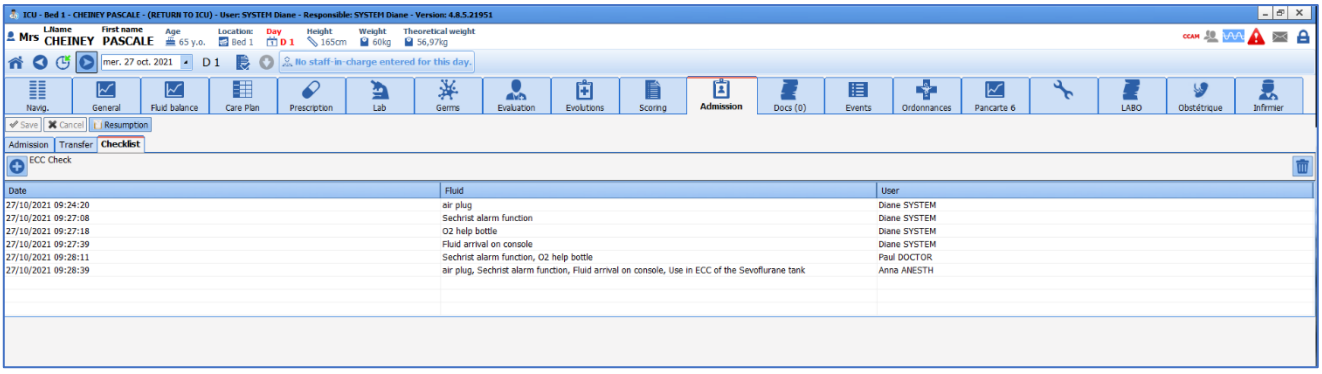
The **Display of Detailed entries as a list** is a feature that lets you list detailed entries. Some data from the detailed entries appears in the table (configured by the key user).

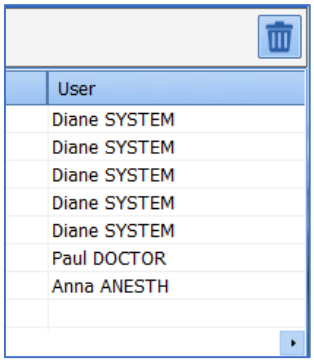
To call up a detailed entry, click on the 'plus' to the top left of the table. If more than one detailed entry is available, a list will appear for you to choose the desired data entry sheet.
Example: it is possible to list different scores in this way. This allows easy access to all types of scores needed.



- If you want to **change** a detailed entry, double-click on the line chosen and the corresponding Detailed entry opens for you to change.

- If you want to **delete a detailed entry**, click on the line chosen and then on the bin to delete the line.





NB: DIANE keeps a trace of all entries. Therefore, an entry can be found when needed.

2.2.10 Multiple entries

Multiple entries are a simple way of entering a series of procedures, drugs, consumables, detailed entries, etc.

This data entry method is used particularly for intraoperative and postoperative monitoring. It is configured by the facility's key user.

2.2.10.1 Triggering multiple entries

Multiple entries can use a button which will be at the top of the screen or can be accessed by right-clicking in the data entry bar of the above-mentioned modules.
The multiple entry clicked on opens.

2.2.10.2 Using multiple entries

Multiple entries can be short for a very specific task, such as installing the patient.
They can also be longer and include all items, for example from the patient's arrival to when they leave a room, which is particularly useful for short procedures (such as elective abortions, a tooth extraction or colonoscopy, etc.).

When you enter the data, you can choose to use all or just part of the multiple entry. Also, by clicking in the boxes, you can enter the drug dosages or change and/or supplement the preselected items.

There is a tick mark on each line to select the actions to confirm. When you enter an item in the line, the tick mark is activated.
You can use each box present. The menu of the selected section can then be modified. The choices available will only be related to what is foreseen by the original predefined list.

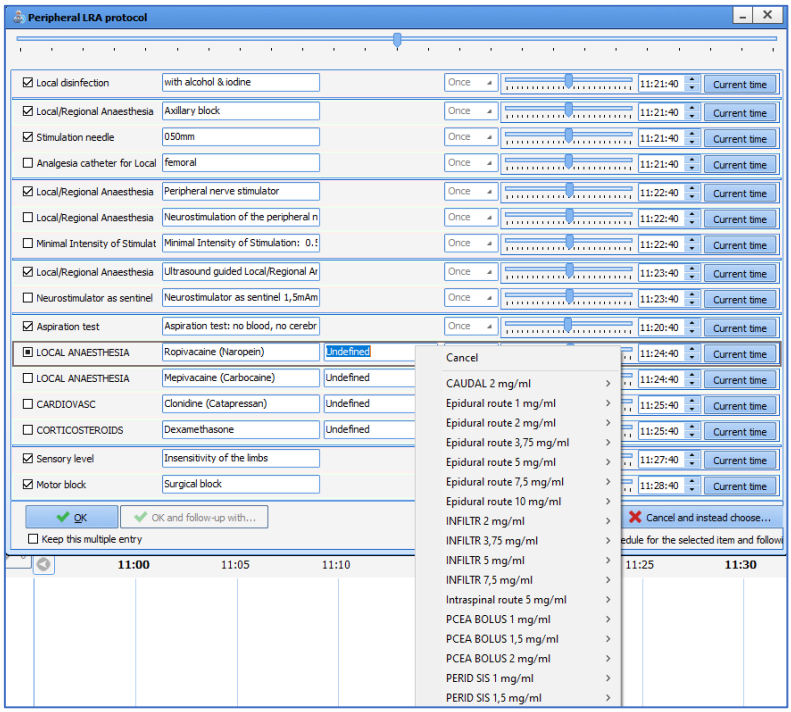
2.2.10.3 Time management

The times, located to the right of the window, can be adjusted:

- either by entering the desired time directly,
- or by sliding the main cursor (at the top of the window): this will change all times while taking into account the preconfigured time gaps,
- or by clicking on the **Current time** button,
- or by sliding the cursor on a single line.

TIP: To slide the cursor on a line and also slide the following ones, keeping the time gaps for the following items,

hold the **CTRL** key while sliding the desired cursor.



2.2.10.4 Close or cancel a multiple entry

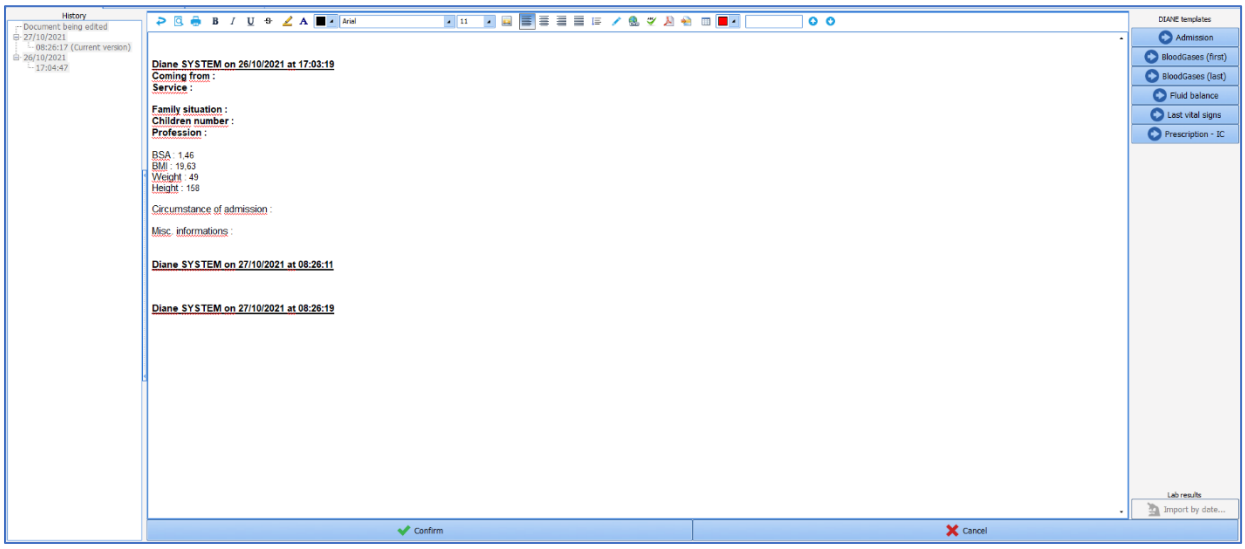
Once the multiple entry is complete, you can:

- Confirm and close it by clicking on the **OK** button,
- Confirm it and go on to another multiple entry (from a selection of multiple entries configured by your key user) by clicking on the **OK and go to...** button.

To cancel the current multiple entry, you can:

- Cancel and close it by clicking on the **Cancel** button,
- Cancel it and go on to another multiple entry (from a selection of multiple entries configured by your key user) by clicking on the **Cancel and instead choose...** button.

2.2.11 Document creation area



The document creation area is used in different situations such as for medical summaries, paramedical summaries or delivery reports.

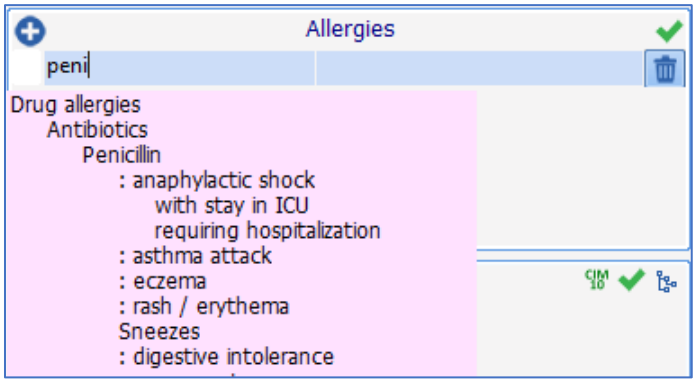
This component lets you create the various reports either by manual entry or by using buttons to the right of the screen.

To start creating a report, you must first click on the **Add information** bar at the bottom.
You can then enter information in the central pane.
Most often, pre-existing templates can be used to create a report by automatically retrieving the data entered in the record.
In the example above, if you click on the **Daily changes** button you will automatically see the patient's history, allergies and the last recorded vitals in the central pane. You can therefore create the report you want by successively clicking on the buttons corresponding to the information you want to retrieve. The information will be added to where the mouse cursor was in the central pane.
Once the report is complete, simply click on **Confirm** at the bottom to save the changes.

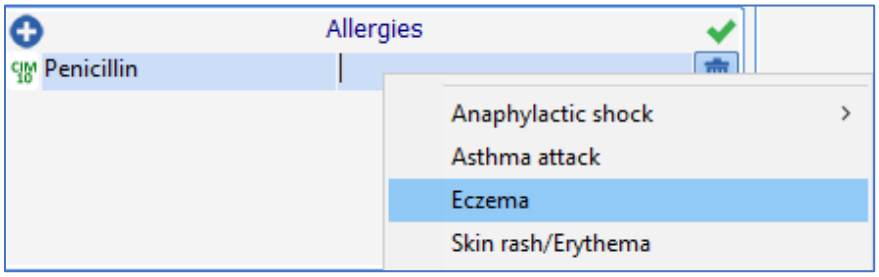
On the right, a collapsible history side panel gives access to all reports previously created.

2.2.12 Allergies component

The **Allergies** field has two columns. The left column is used to enter the allergen. When you enter the first letters a list of allergens appears for you to choose from.



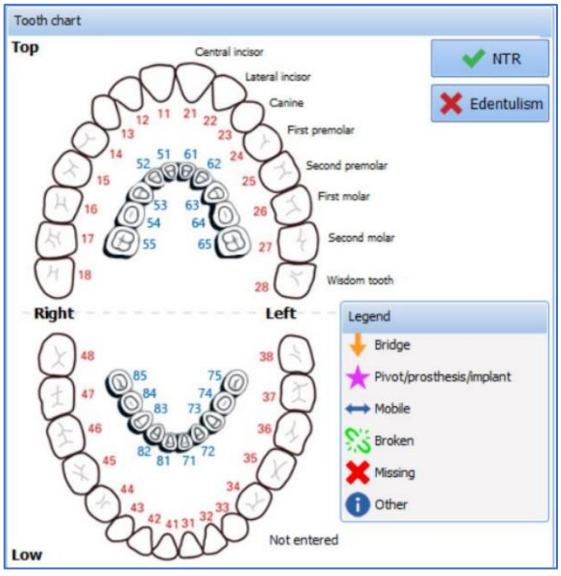
In the right column, right-click to access a list of allergic reactions caused by the product.



NB: There is a link between the **Allergies** component and the medication order. If the treatment prescribed mentions an allergen listed in the **Allergies** component, you will be warned that an allergy has been detected. This warning does not block the medication order.

2.2.13 Tooth chart

The tooth chart is suitable for adults and children as it shows both the primary teeth and permanent teeth. The features for both types of teeth are identical with the exception of the Edentulism button which is only for permanent teeth.



Items are entered into this component in different ways:

- By clicking on a tooth: you can scroll through the different options available.
- By dragging and dropping: by dragging an item from the legend onto the relevant tooth.

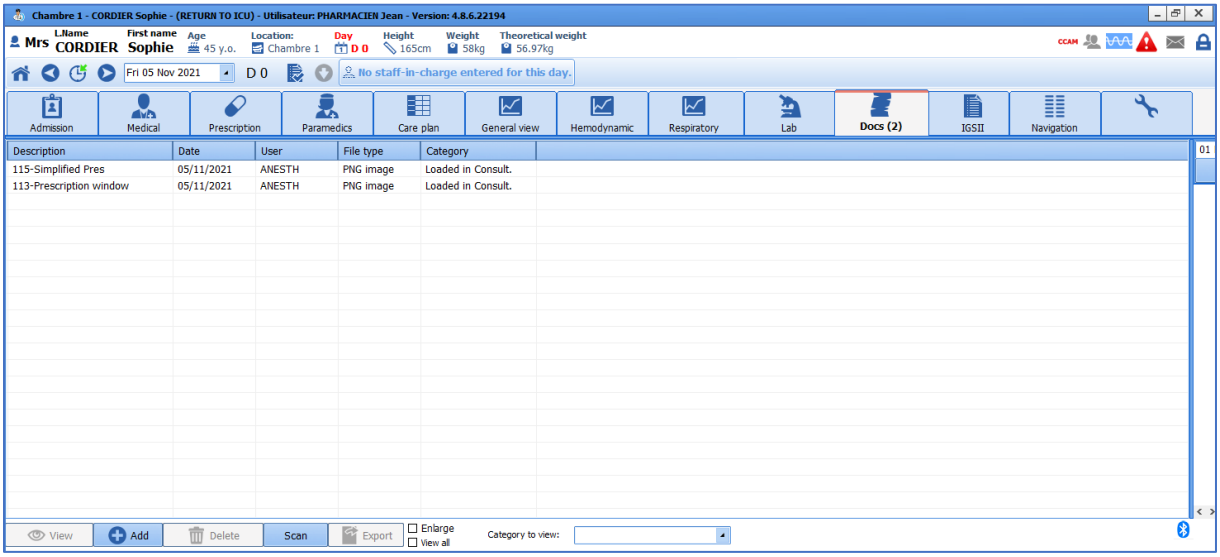
The **NTR** button resets the diagram.

2.2.14 Common tabs

Some tabs are found in all modules. These tabs are explained below.

2.2.14.1 Documents tab

This tab lets you save and store the different documents from a patient's record. You can save and store documents created directly in **DIANE** but also attach documents that are not in the record such as scanned images or images imported from other software such as ECGs or X-rays.
These documents can be viewed by clicking on the corresponding line and can be generated and printed from this tab.



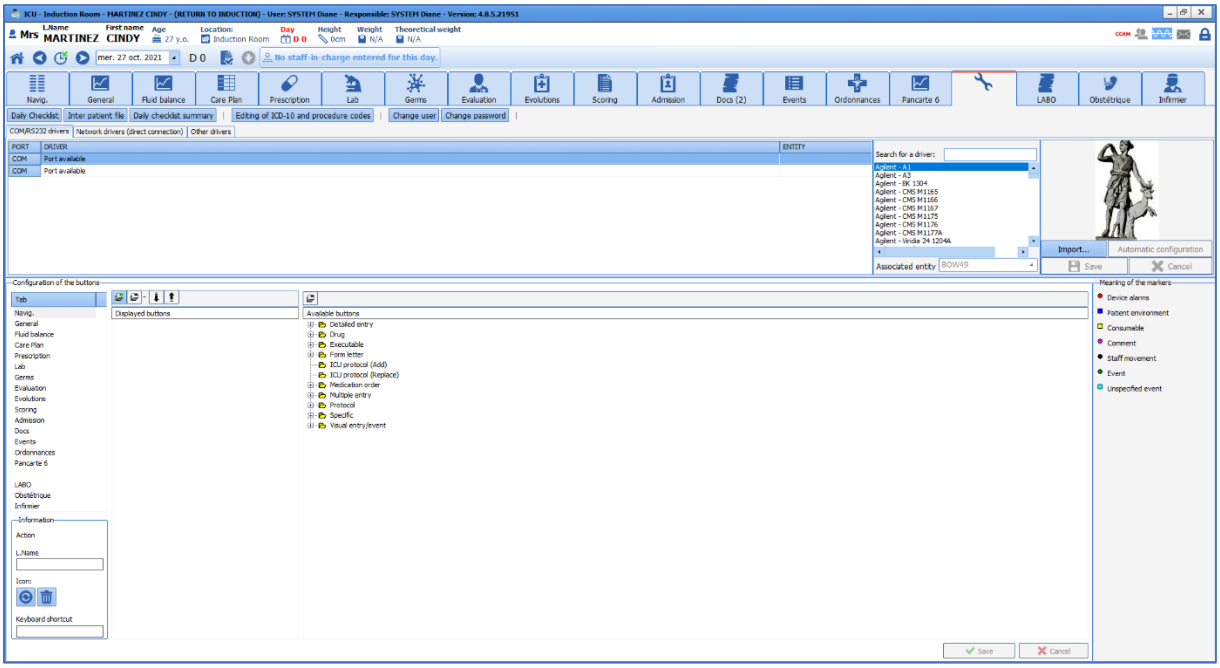
All this information is stored in the patient's record and can, if you wish, be exported to another software.

NB: You can make changes to a file saved in this tab.

2.2.14.2 Configuration tab

The **Configuration** tab lets you **configure the drivers** of biomedical equipment connected to the computer and **configure the buttons**.
We also see the meaning of the markers inserted in the **Events** line of the **Monitoring** tab or **views**.

The **Configuration** tab buttons give access to certain detailed entries (checklist, identity monitoring, etc.) and enable ICD-10 and procedure codes to be generated.



2.2.14.2.1 Configuring connected devices

After connecting the biomedical equipment to the computer using the appropriate cable, it must be configured in DIANE. To do this, simply select the name of the device from the list and drag it with the mouse to the **Com Port** it is connected to.

REMARQUE : the value retrieved from the biomedical equipment and displayed in DIANE is the median of all values received over 30 seconds.

Right-click on the monitor connected to a Com Port to display a menu to **Restart**, **Configure**, **Remove the driver** or **Enable Debug mode**.

If there is a problem receiving the values from a monitor, you can **Reboot the driver**. If this does not solve the problem, contact your site administrator to check the configuration.

If the biomedical equipment in a room is changed, you can **Remove the driver** from the Com Port to free it up to install other biomedical devices.

The drivers are preconfigured to operate with biomedical equipment. However, if the equipment has a specific configuration, you must first **configure the driver** using the **Driver configuration** window.
This window is used to configure the **Communication settings** and the **Flow control** between the computer and the equipment. *See the monitor documents to find out the settings for each part of this window.*

2.2.14.2.2 Configuring buttons in the different tabs

You can create programmable buttons available in the application's different tabs. These buttons can be used for simple data entry (intubation, incision, closure, extubation, etc.), to open a multiple entry window, to calculate scores, etc.

To add a button to a tab, first, in the **Button configuration** area, select the **Tab** in which you want to insert your button. Then expand the tree of **Available buttons** and choose the button you want to insert. Using the mouse, drag and drop this button onto the list of **Displayed buttons**.

The table below shows the meaning of the different buttons in the **Configuration** window.

Buttons	Function
	These two buttons let you change the display order.
	When located above the displayed buttons area, this button lets you add a separator between button groups. The separators are created at the end of the list. Simply move them around using the arrows mentioned above. When located next to an **icon**, this button associates an icon with the button selected in the list of **displayed buttons**. Enter the icon's access path then click on the **Open** button.
	When located above the **displayed buttons** area, this button lets you delete a button or a separator from the selected **tab**. When located above the **displayed buttons** area, this button lets you delete a button from the configuration. When located next to an **icon**, this button is used to delete the icon associated with the button selected.

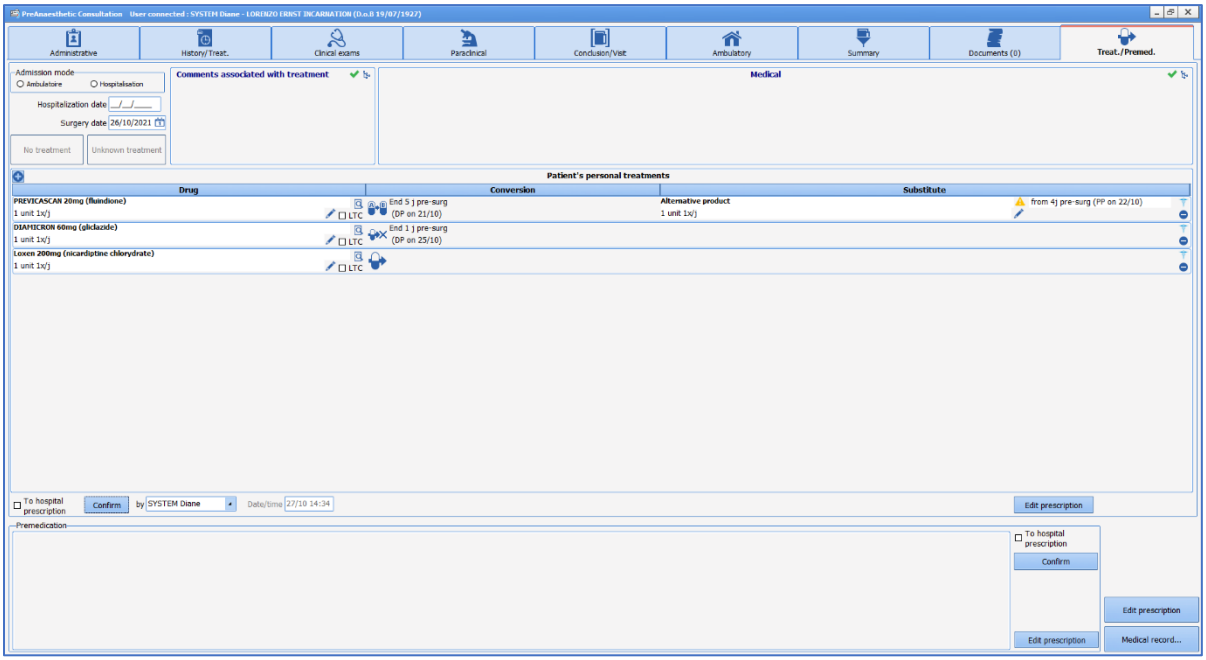
In the Information area, located on the left side of the **Button configuration**, you can change or delete the name of a button after selecting it from the list of **displayed buttons**.

2.2.14.3 Treatment/Premedication tab

This tab lets you replace the two components **Current Treatments** and **Continue**, **Switch and Stop**. It lets you enter the patient's current treatment and manage it.

You can enter the patient's treatment line by line and then, using favourites, manage switches, continued treatment or discontinuations.
You will then be able to generate the prescription form accordingly but also prepare the postoperative medication order.

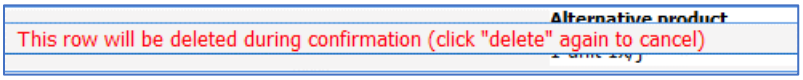
Weight, height, gender and age are necessary to analyze the medication order. If these have not been entered beforehand, a window will automatically open asking you to enter them.



2.2.14.3.1 Buttons

The button lets you add a line.

Clicking on the button to the right of the line deletes that line.



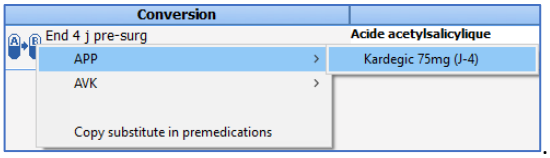
NB: The line is actually deleted when you confirm by clicking on the **Confirm** button in the section concerned

---

When you click on the dosage a specific window opens to enter the dosage easily.
To provide more information, you can use the pencil shown above.

By clicking on the magnifying glass you can enter the medical condition for which this drug has been prescribed. At the same time, this enters the information in the **Medical History** component. This data entry method enters the ICD-10 codes automatically.

By clicking on the capsule button, you can scroll through the different choices:

Switch: right click to see the switch menu 

.

Drug continued

Drug discontinued

LD = Last Dose
FD = First Dose

2.2.14.3.2 Reconciliation

The reconciliation area shows what course of action has been decided for the drug: continuation, but particularly switches and discontinuation. In this area, you can adjust the number of days before the surgery the drug is stopped by clicking directly on the proposed number. If the surgery date has been entered, DIANE will calculate the date of the last dose (**LD**).

2.2.14.3.3 Substitution

The substitution area lets you enter the drug chosen for the switch, the dosage and the date of the first dose (**FD**) expressed as the number of days from the surgery date. You can change the default choice by clicking directly on the name of the drug or by using the pencil to the right of the replacement drug.

IMPORTANT: Note that all drugs can have favourites created by your key users.

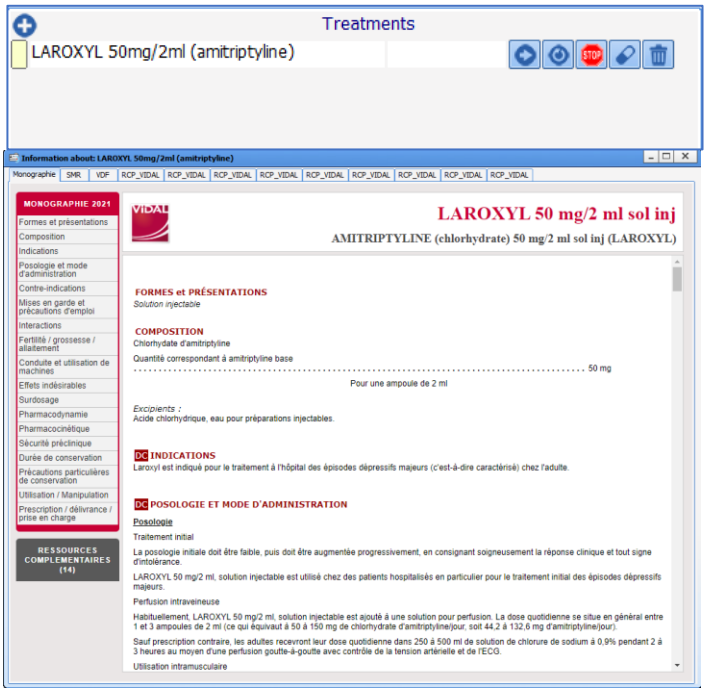
2.2.14.3.4 Confirm the medication order

Each area of the Treatment/Premedication tab has its own confirmation button. This confirmation is equivalent to an electronic signature.
If the **To hospital medication order** box is ticked, before confirmation, everything entered will be sent to the Medication order tab in DIANE ANAESTHESIA and /or DIANE ICU.

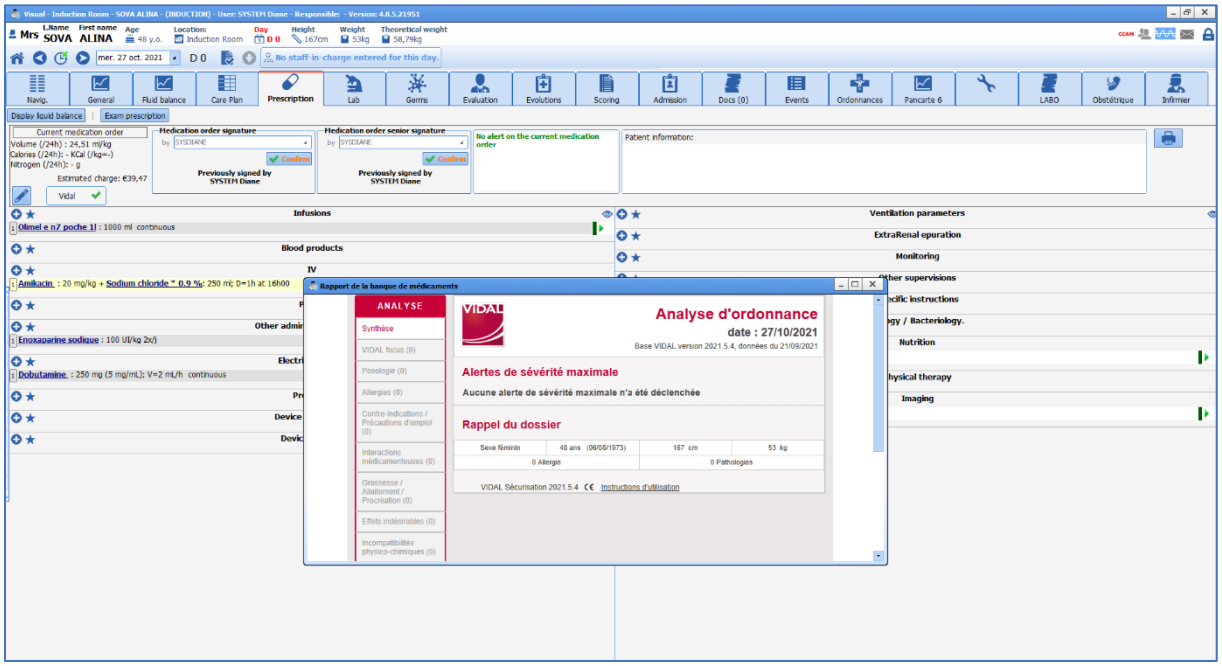
After confirming, you can print out the prescription by clicking on the **Issue prescription** button.

2.3 Link to drug databases

DIANE is linked to drug databases (Vidal® and Base Claude Bernard®) and facility formularies. This improves medication order safety.
When entering a treatment in the **Current treatments** component, clicking on the yellow rectangle next to the data entry line gives direct access to the drug monograph.



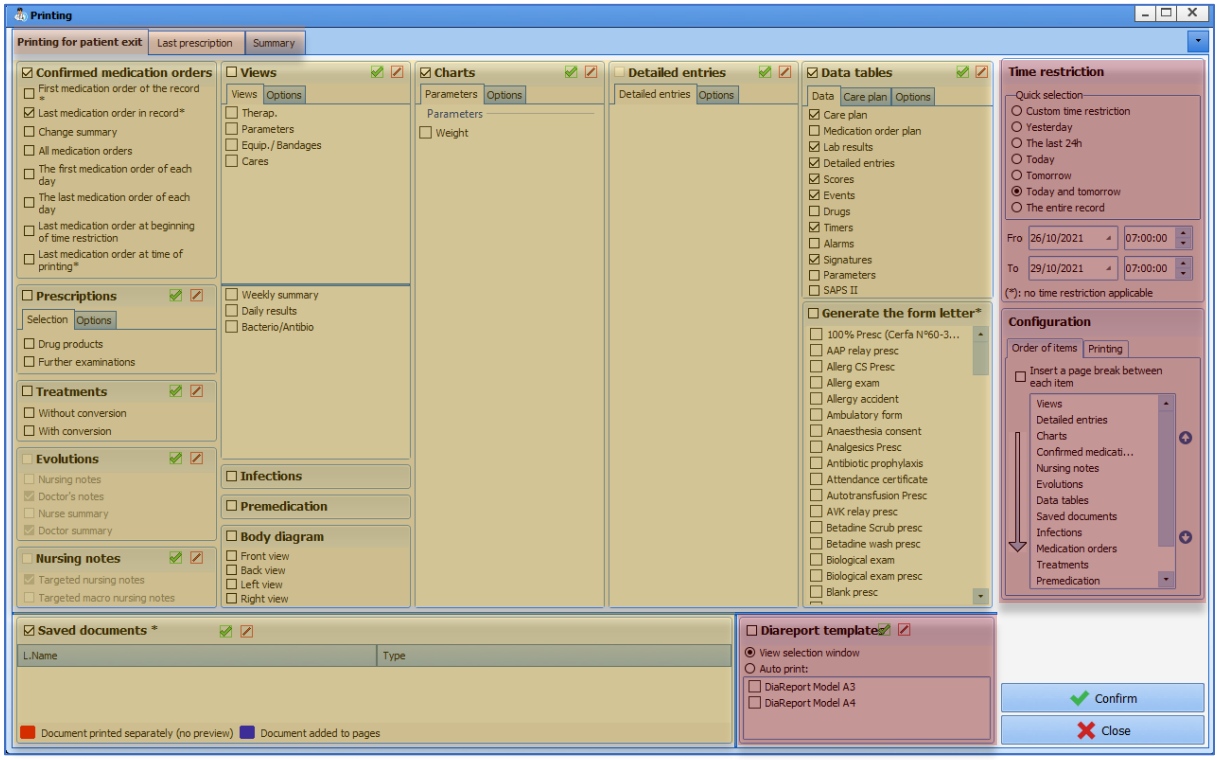
Likewise, when a medication order is signed, whether in the **Medication order** tab or from the Issue prescription form feature, a report from the drug database will be displayed automatically. This report summarizes potential drug interactions, related known allergies and possible overdoses.



NB: these warnings let you check the medication order but will not block it. The drug can always be prescribed.

2.4 Centralized printing

This page groups together all the printable items in the record.



This tool is organized into areas illustrated by colour above.

*** In yellow:**

The Yellow area is divided into nine sections: **Confirmed medication orders**, **Prescription forms**, **Treatments**, **Status changes**, **Nursing notes**, **Views**, **Infections**, **Premedication**, **Body diagram**, **Charts**, **Detailed entries**, **Data tables**, **Generate form letter**, **Recorded documents** -

Each of these sections has a series of checkboxes.

There is a *checkbox* to the left of the section heading to select all subsections.

You can select separately each item that you want to print by clicking on its checkbox.

Some boxes have two tabs, others have none and one has three.

* Views (2 tabs): the non-modifiable option indicates the display duration.

* Charts (2 tabs): used to configure the discontinuity of the curves, the printing scale, the height of the charts and to differentiate between values provided by biomedical equipment and manual data.

* Detailed entries (2 tabs): lets you print all the entries of the same detailed entry or only the last entry (e.g. if a score has been entered several times, you can print all the entries for this score or just the last one).

* Data tables (3 tabs): in the **Care plan** tab, you can filter according to the status of the care (To do, done, etc.), sort entries either by category or chronologically. The **Other options** tab lets you sort the entries, other than care plan, either by category or chronologically and define which vitals to display. The asterisk indicates that the time restrictions seen in the red area do not apply.

*** In Red:**

This area includes three boxes: **time restrictions**, **configuration** and the **DiaReport template**

* Time restriction: lets you define the date and time of the start and end of data handling. The default time is the start of the ICU day.

* Configuration: this box has two tabs: **Order of items** and **Printing**.

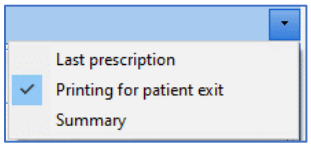
- **Order of items**: lets you prioritize the printing of the tool categories. Click on a line and click on the arrow to print the tool category before and on to print the tool category later in the batch. If you want, you can insert a page break between each different tool category.

- **Printing**: lets you manage the way reports are printed or exported. In the Page subtab, you can manage the margins, orientation and size of the printed paper and also the font. With the Advanced subtab you can choose a specific printer and configure the document's export.

*** In Orange:**

This area groups together preconfigured tabs. Each of these tabs is linked to a context. In our example, three tabs have been configured: **Printout for patient discharge**, **Last medication order** and **Moved for examination**. The content of these three tabs is identical apart from the ticked boxes.

To the right of the bar containing the tabs, there is a box with an arrow pointing downwards: this provides the complete list of tabs.



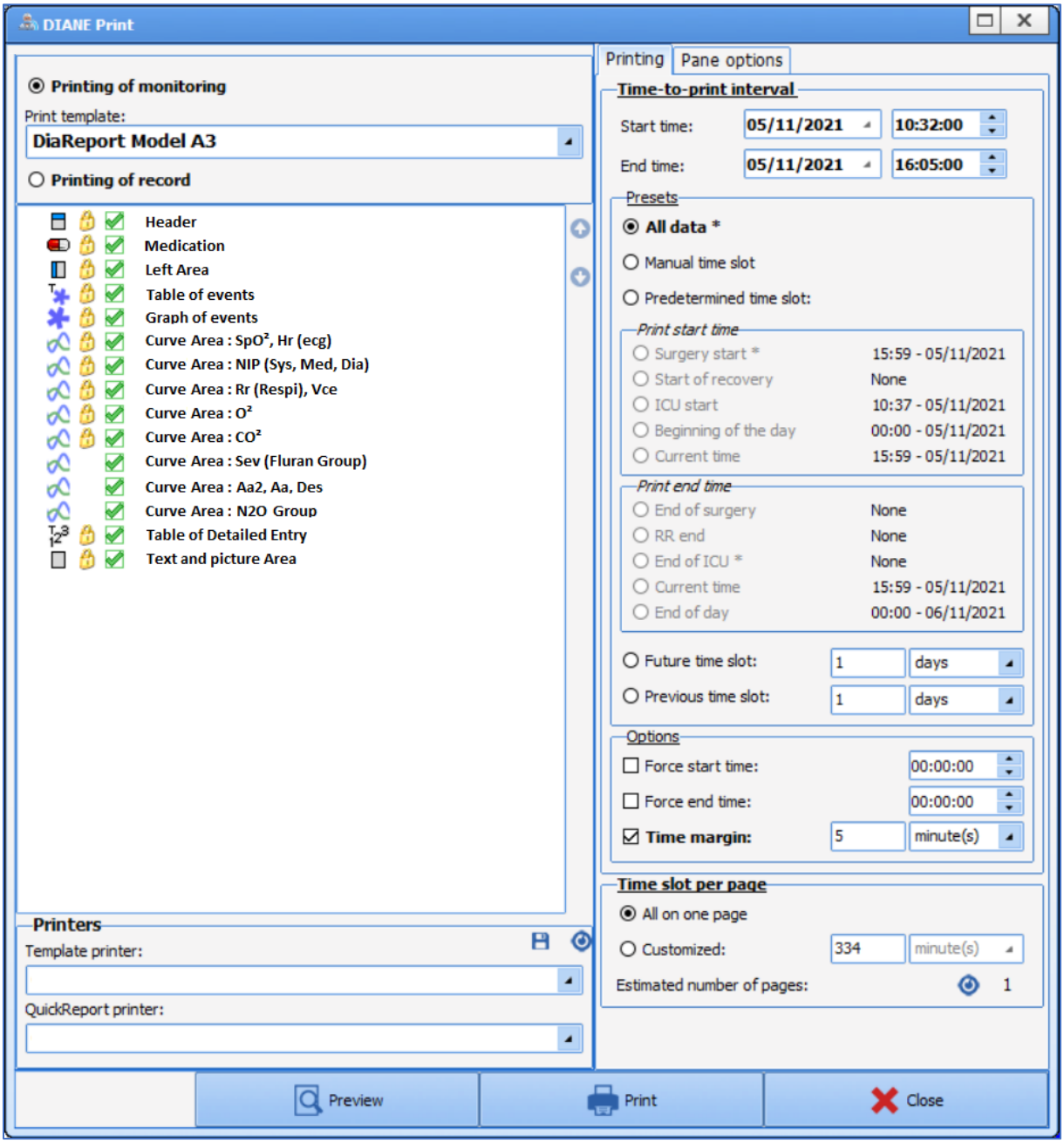
2.4.1 Viewing and printing a surgery

2.4.1.1 Printing intraoperative and postoperative monitoring

After clicking on the **Print surgery button**, a **DIANE Printing** window opens for default printing or to configure the printing as needed.

This can be done during or at the end of the surgery, when exiting the record or when viewing a previous record.

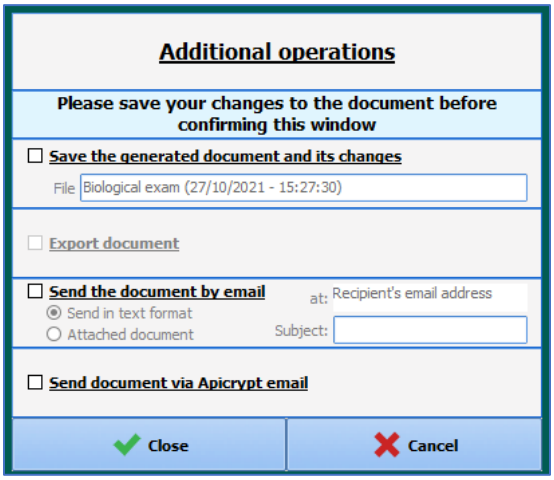
The initial layout is defined by the administrator but some changes can be made by the user.



At the top left, it is possible to choose another print template (predefined by the site's key user). This can be useful for complicated surgeries or to have a more comprehensive document than usual.

It is also possible on the right part to customize the printing time slot and define the duration on each page. By default, the entire surgery is on one page.

The printer selected at the bottom left of the window is the computer's default printer. If other printers are available on the network, you can, exceptionally, send the document to them using the drop-down menu.



When a document is actually printed, the window opposite opens. It lets you save, export or even send the printed document by email.

2.4.1.2 Buttons

The **Print** button lets you start printing without seeing a preview.
The **Preview** button lets you view the printout in the **Preview** window.
The **Request to save generated documents** checkbox is used to always confirm whether or not you want to keep the document generated in the **Documents** tab from the preoperative assessment.
The **Close** button cancels the current print request.

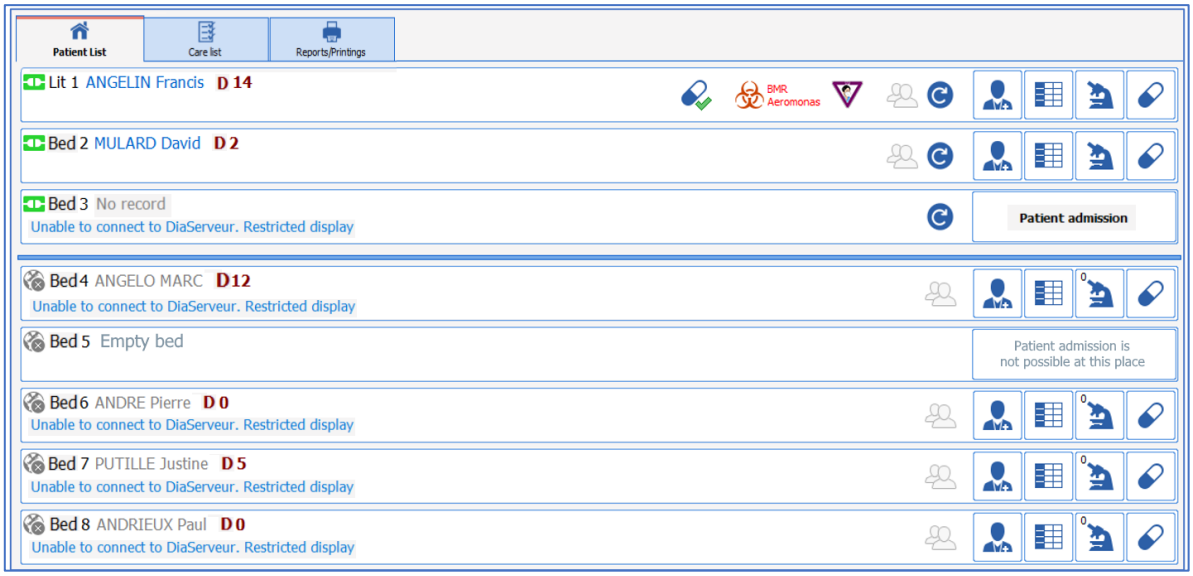
2.4.1.3 Viewing past surgeries

DIANE lets you view a surgery already performed, displaying all the physiological parameters retrieved from the monitors connected to the patient, the textual data (patient, surgery, preoperative and postoperative data), and all the manual entries during the surgery (drugs, events).
Click on the **Open patient record** button of the intraoperative and/or postoperative application. Select the Patient record and the relevant surgery then choose **View record**.

NB: You can view all anaesthesia reports from any computer connected to the server.

2.5 The cockpit

The Cockpit is an overview of all the patients present in the unit. It gives quick access to patient records and essential medical information and helps share information between caregivers.



1 - Manage unavailabilities.

2 - View/Complete a record.

3 - Print grouped medication orders.

4 - Print the list of hospitalized patients.

5 - Denials list.

6 - Open **DIANE** messaging.

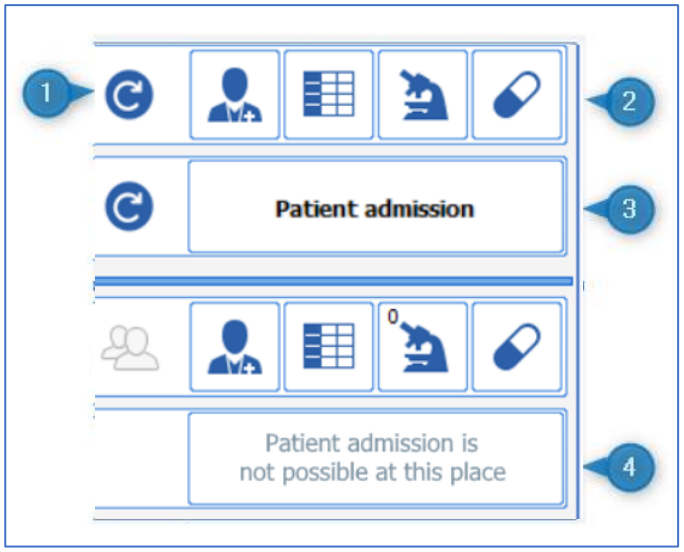
7 - Log out the current user (locks the **DIANE** computer and exits records opened remotely).

In the right part of the ribbon, the user also has access to various functions such as 'View/ Complete a record', 'Change user', etc.

NB: **DIANE** gives access to all of the unit's records from any computer in your unit.

The different lines represent patients with, from left to right, the bed number, name, number of days in hospital and potential infection.
The buttons on the right give access to the record's different tabs.

NB: The green icon next to the bed means that the patient's record is accessible remotely from a Mirror computer. If the black icon is present, it means that remote access is not possible (this may be due to a hardware or network problem).



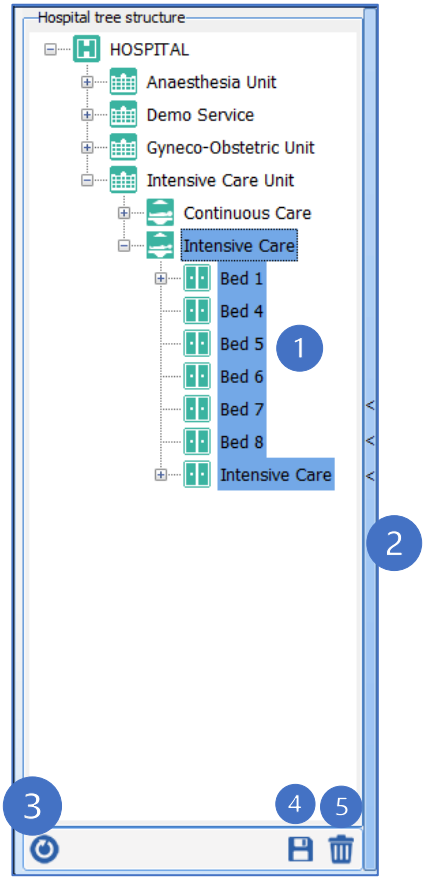
1 – Reboots the **DIANE** applications on the computer.

2 – Lets you directly access the record's different tabs.

3 – Lets you admit a new patient (opens the patient selection window).

4 – Patients can only be admitted on the Primary computer.

In the left part of the screen, if you click on the vertical bar where there are three arrows, you will have access to the hospital tree structure. By default, the application displays the patients in the unit. However, it is possible to change this display by clicking on the other items in the tree structure.



1 – The items in the area highlighted in blue are those displayed on the portal.

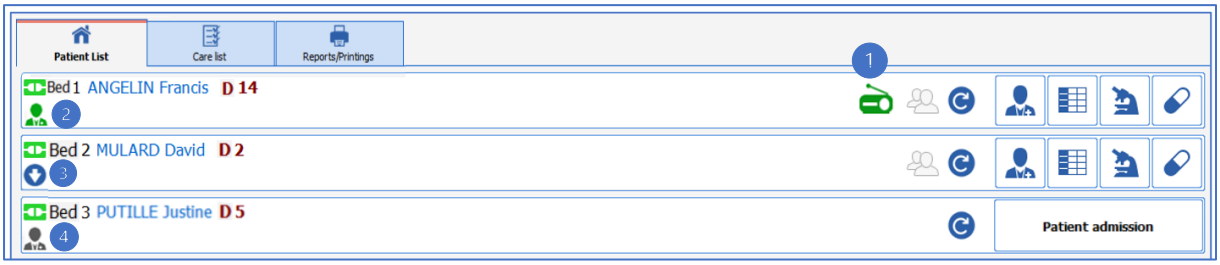
2 – Clicking on the blue bar with the 3 arrows opens (or closes) the hospital tree structure.

3 – Reloads the default location.

4 – Saves as the default location.

5 – Deletes the default location.

From the central part of the cockpit, you can 'Take responsibility for the current time slot' for a patient by clicking on the button . This means that the user says that they will take care of the patient for the defined time slot (only valid for **Doctor**, **Nurse** and **Nurse aide** profiles).



1 – Issue-based nursing no tes in the last 24 hours.

2 – You are in charge of this record.

3 – Take responsibility for current time slot.

4 – Another person is responsible.

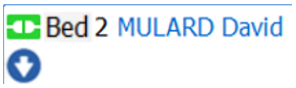
When someone takes responsibility the icon changes to .

2.5.1 List of hospitalized patients

This page provides an overview of your unit. The different buttons provide access to patient records.
From any computer in the unit, you have read and write access to all patient records.

NB: The green icon next to the bed means you have remote access to the patient's record. If this icon is red, it means that you do not have access to the record (this could be due to a hardware or network problem); if it is yellow, there is an attempt to connect to the bed and a black icon means that remote connection is not enabled.

Cockpit icons:

	This icon lets you know if the patient has an infection. If you hover the mouse over it, the infection is displayed. If you click on this icon, you will be redirected to the **Germs** tab.
	This icon lets you know if the patient is infected with coronavirus.
	This icon shows the patient has physiotherapy scheduled for the day.
	This icon shows that the medication order is being edited.
	This icon shows that the current medication order is signed, i.e. that the medication order is not being edited.
	The icon under the patient's name shows that nobody is in charge of the record. If you wish to be in charge of the record, click on this icon. Two people with different functions can claim responsibility for the patient: intensivists and registered nurses.
	The icon under the patient's name shows that you are in charge of the record.
	The icon under the patient's name shows that somebody else is in charge of the record. You can see the name of the person in charge by hovering over the icon.
	The green radio icon means that an issue-based nursing note or a current situation nursing note is valid. When you click on the icon, you access the nursing note tab.
	These three icons relate to pharmacist actions. The pharmacist unreservedly accepts the medication order: no reservations or warnings are issued. The pharmacist accepts a medication order with reservations. To see what reservations have been issued, go to the **Medication order** tab: when a medication order line is associated with a reservation, the previously green icon becomes orange. The pharmacist warns that there is an inconsistency or danger. To see what warning has been issued, go to the **Medication order** tab: when a medication order line is associated with a warning, the previously green or orange icon becomes red.
	When there is a message, the icon automatically turns red and remains so for 24 hours (duration configurable).
	Nursing notes icon.
	Clicking on this button takes you to the patient's medical record (configurable button).

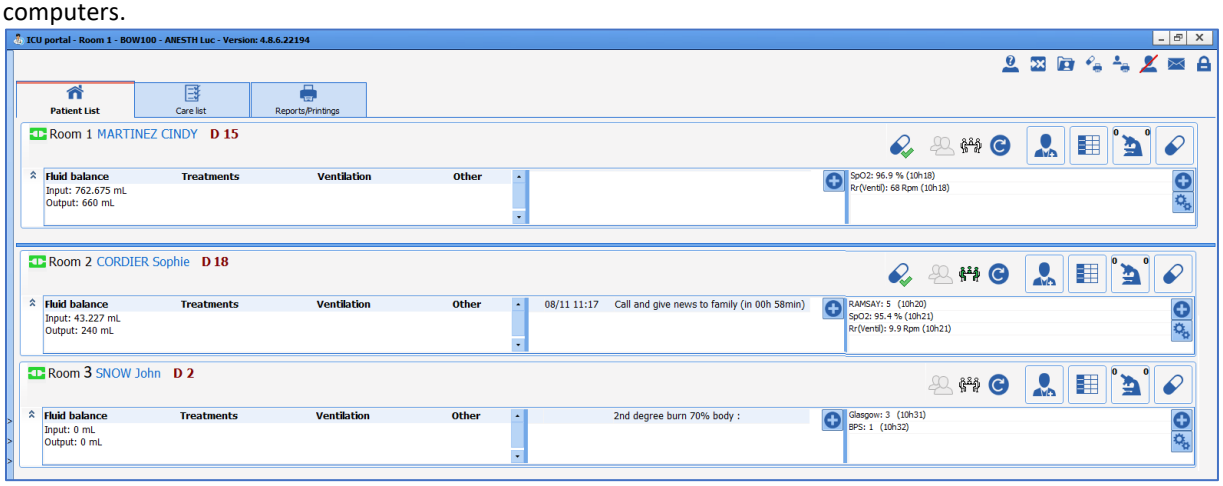
	Button to go to the care plan (configurable button).
	Button to go to the **Lab** tab (biological parameters) (configurable button).
	Button to go to the **Medication order** tab (configurable button).

Some buttons may be greyed out. This happens when you do not have sufficient user permissions or the buttons cannot be used (for example if you are offline).

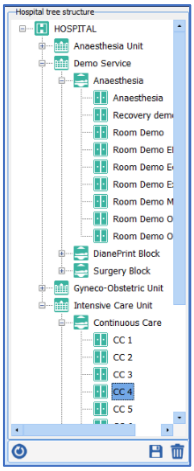
To take control of a patient remotely, just click on the patient's name and the software offers read-only access or write access.
The arrows to the left of the hospitalized patients list make it possible to view the entire unit and take control of the bed you want.

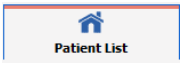
2.5.2 Patient information

The ICU portal (or Patient list) lets you view beds on the primary computer station as well as the remote computers.

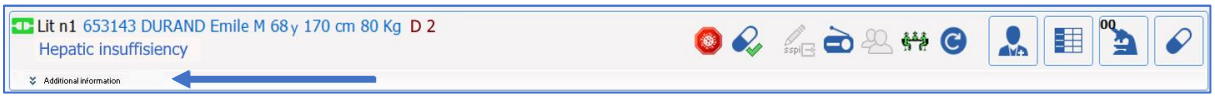


The collapsible side panel on the left lets you select the remote computers to display.



A collapsible **Additional information** side panel lets you display data for each patient. Double-clicking on the button in the **Present** 

tab will expand the **Additional Information** pane for all patients in the list.

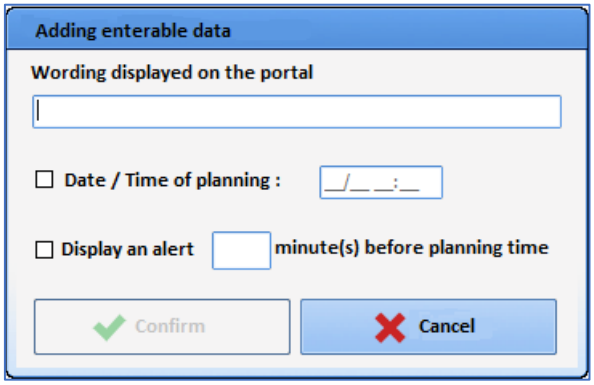


This data is divided into three panes:

- On the left, information about **data in the record**: ventilation mode, fluid balance and treatments.
  Three time intervals are available for the fluid balance:
  - last 24 hours
  - Current ICU day
  - Previous ICU day

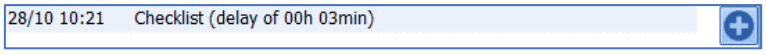
  Treatments displayed in this field can be:
  - Analgesics
  - Sedatives
  - Amines
  - Muscle relaxants
- Enterable data is in the centre.

  The second pane lets you click on the button in order open a window for entering the care to be provided:



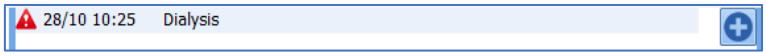
-

Description displayed on the portal is a text input box that lets you enter information to be displayed on the portal. This box is mandatory and automatically unlocks the **Save** button.
The **Scheduling date/time** input box is used to enter the scheduled date/time for the data. This information is optional and is displayed on the portal:

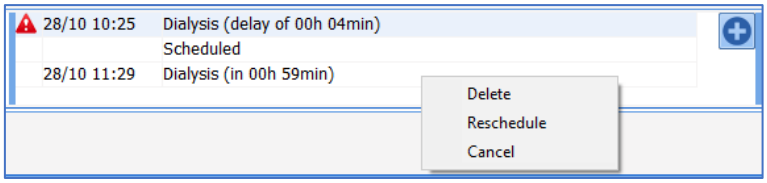


If the information is not entered, only the description will be displayed on the portal:

Display an alert 'X' minutes before the schedule lets you enter a time, in minutes, after which an alert will be displayed on the portal:

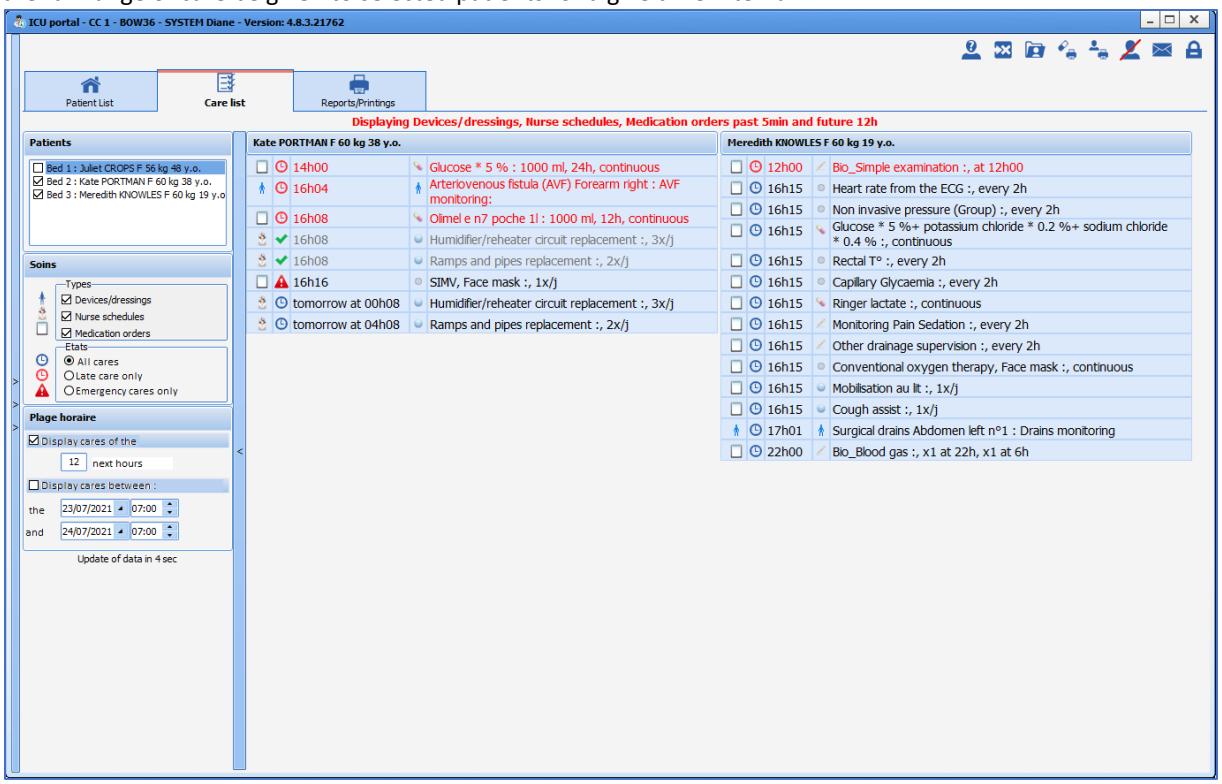


Clicking on each item lets you delete (i.e., completed), cancel or reschedule an item:

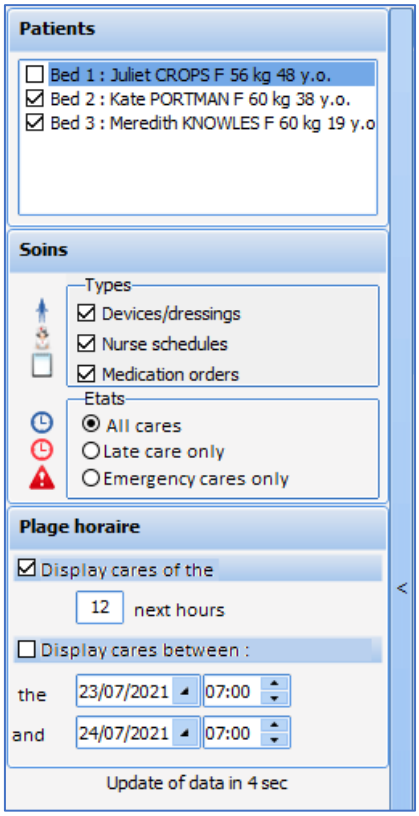


2.5.3 Care list

The care list is accessible from the Care list tab of the **Patient list** module (or **Cockpit**). It allows caregivers to see the full range of care be given to selected patients for a give time interval.



Clicking on the care type icon for an item in this list will take you directly to the care item in the patient's care plan. However, care items displayed on the portal can be confirmed only in the patient's record.

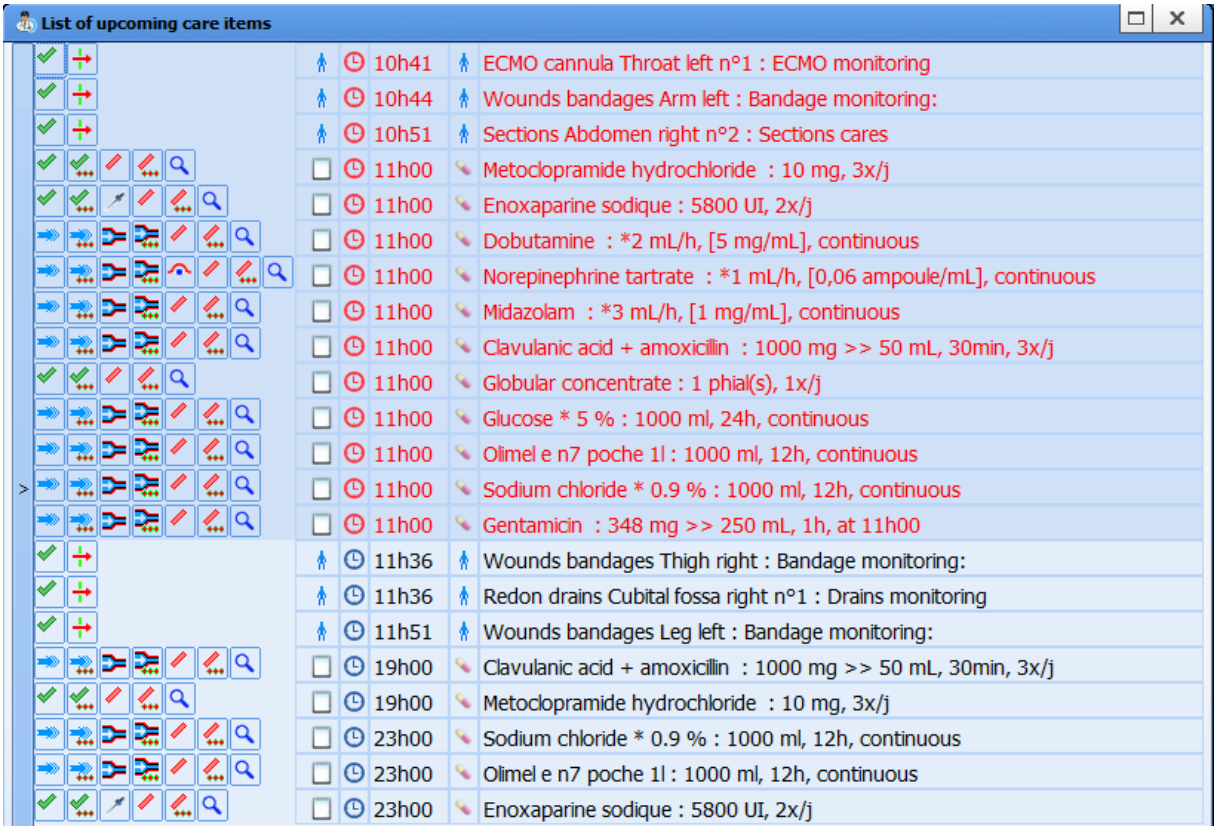


This collapsible selection side window lets you filter:

- Patients (by default, patients under the care of the online caregiver are displayed)
- The types of care to display:
  - Devices/dressings (medical devices on the body diagram)
  - Nurse schedules
  - Medication orders
- Care status:
  - All care
  - Overdue care only
  - Urgent care only
- The time interval (two possible solutions):
  - Display care over the next 'X' hours
  - Display care for a specific date and time period

Overdue care is always displayed (in red) regardless of the selected time interval.

The care list is available in the patient's record by clicking on the button. Clicking on one of the following buttons displays the corresponding tab in the care plan.



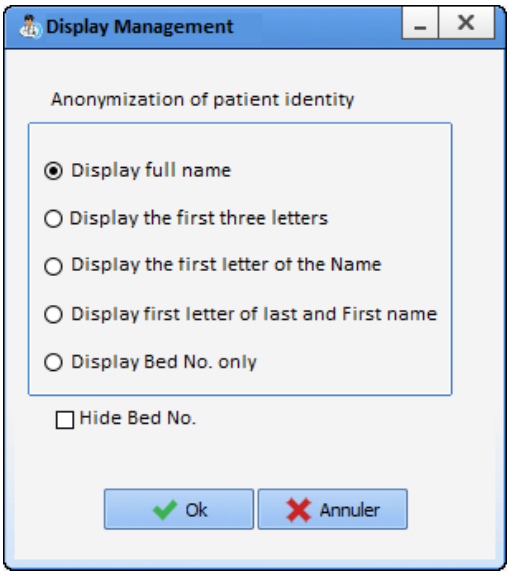
In this window, you can perform a number of actions (do, do not do, start, specify dilution, display medication order, etc.) by clicking on the corresponding icons. Just as in the care plan, the icons vary according to the type of medication order.

Only the first confirmation is possible from the care list. A treatment that has already started can be edited only from the treatment plan (change of flow rate, etc.).

After being confirmed, the line turns white. At this stage, it can be cancelled if an error is made. The confirmed care item disappears from the care list after a pre-set time (5 minutes by default).

2.5.4 Bed anonymization

The button lest you anonymize the identity of patients visible on remote computers.



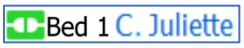
This window contains five buttons:

- **Show full name**: default setting

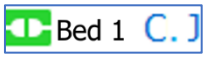
- **Show first three letters of last name**:

The first three letters of the patient's last name appear followed by an ellipsis (…).

- **Show first initial of last name only**:



- **Show first and last initials only**

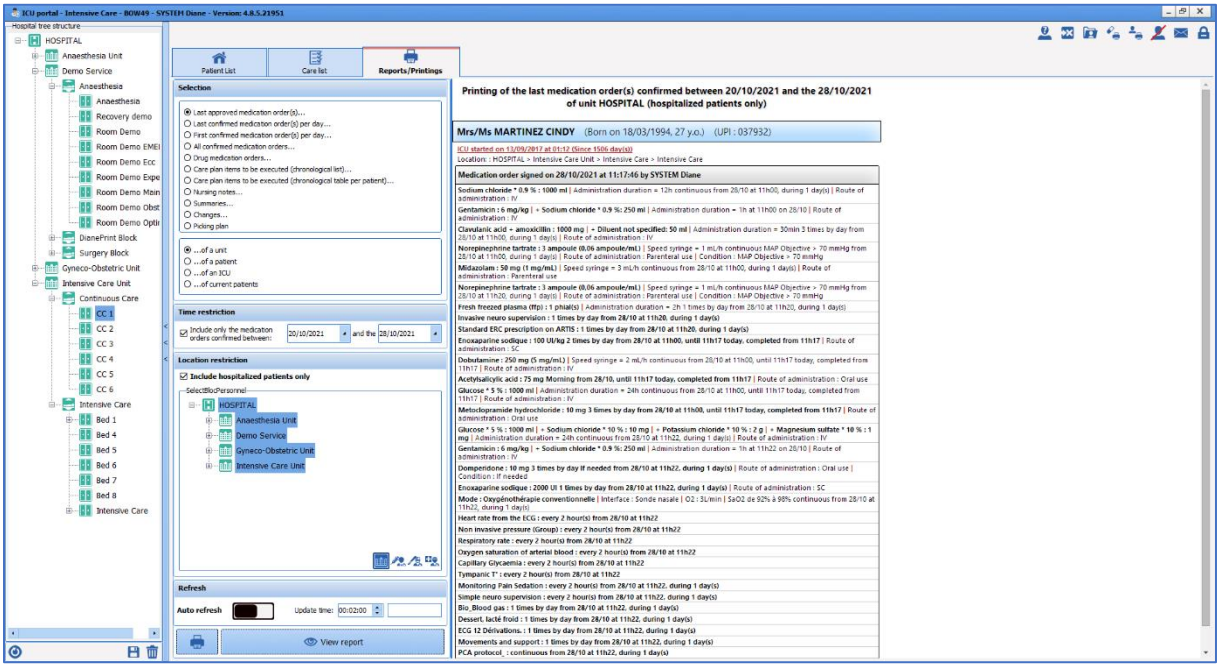


- **Show bed only**: if this option is selected, the **Hide bed** checkbox is greyed out, unticked and uneditable.

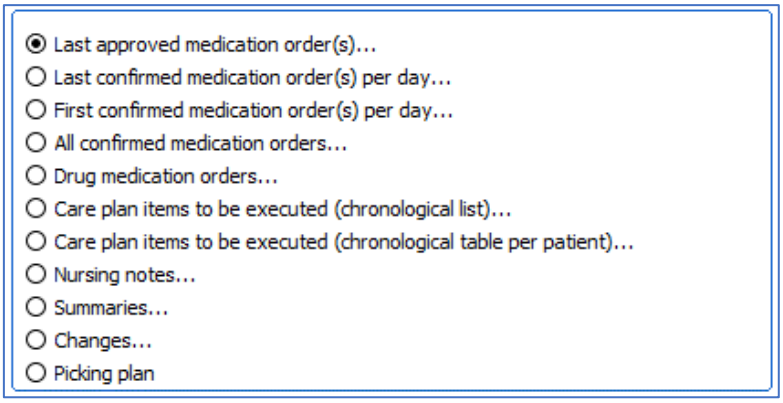
Caution: patients are not anonymized on the primary computer.

2.5.5 Print report

This page lets you view and print reports on patient record information.



You can select the type of information you want to view in the left column.



1: Last approved medication order(s)... (by default) - This option displays the last medication order for each patient concerned by the other filters.

2: Last confirmed medication order(s) per day - This option displays the latest medication order for each patient.

3: First confirmed medication order(s) per day - This option displays the first medication order for each patient.

4: All confirmed medication orders - This option lets you display all medication orders except those being written.

5: Drug medication orders – This option displays the "drug only" medication orders.

6: Care plan items to be executed (chronological list) - This option displays the items in the care plan that have not yet been done (as a list).

7: Care plan items to be executed (chronological table per patient) - This option displays the items in the care plan that have not yet been done (as a table).

8: Nursing notes - This option displays the nursing notes between health workers (registered nurses, physiotherapists, dieticians, etc.).

9: Summaries - This option displays patient summaries.

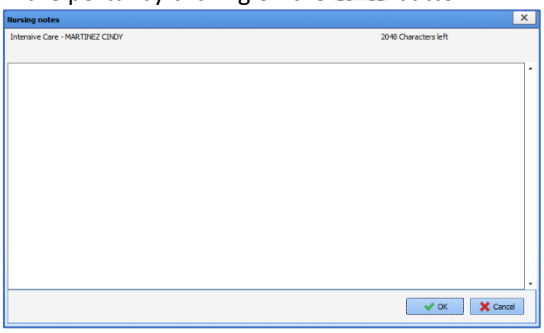
10: Changes - This option displays patient status changes.

11: Picking plan – This option displays the picking plan.

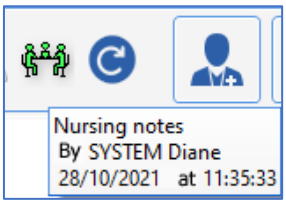
It is also possible to display previous data for the whole unit, for a patient, for an intensive care unit or for patients taken charge of.

2.5.6 Medical notes

Nursing notes can be entered on the portal by clicking on the button:



The icon turns green when nursing notes have been entered. Hovering the mouse over it will show who made the entry and on what date.



2.5.7 NHI status

On the portal, a patient's identity status is indicated by the colour of the word '**NHI**' located after the bed number:

- Grey NHI: unknown identity
- Red NHI: temporary identity
- Blue NHI: retrieved identity
- Yellow NHI: confirmed identity
- Green NHI: qualified identity

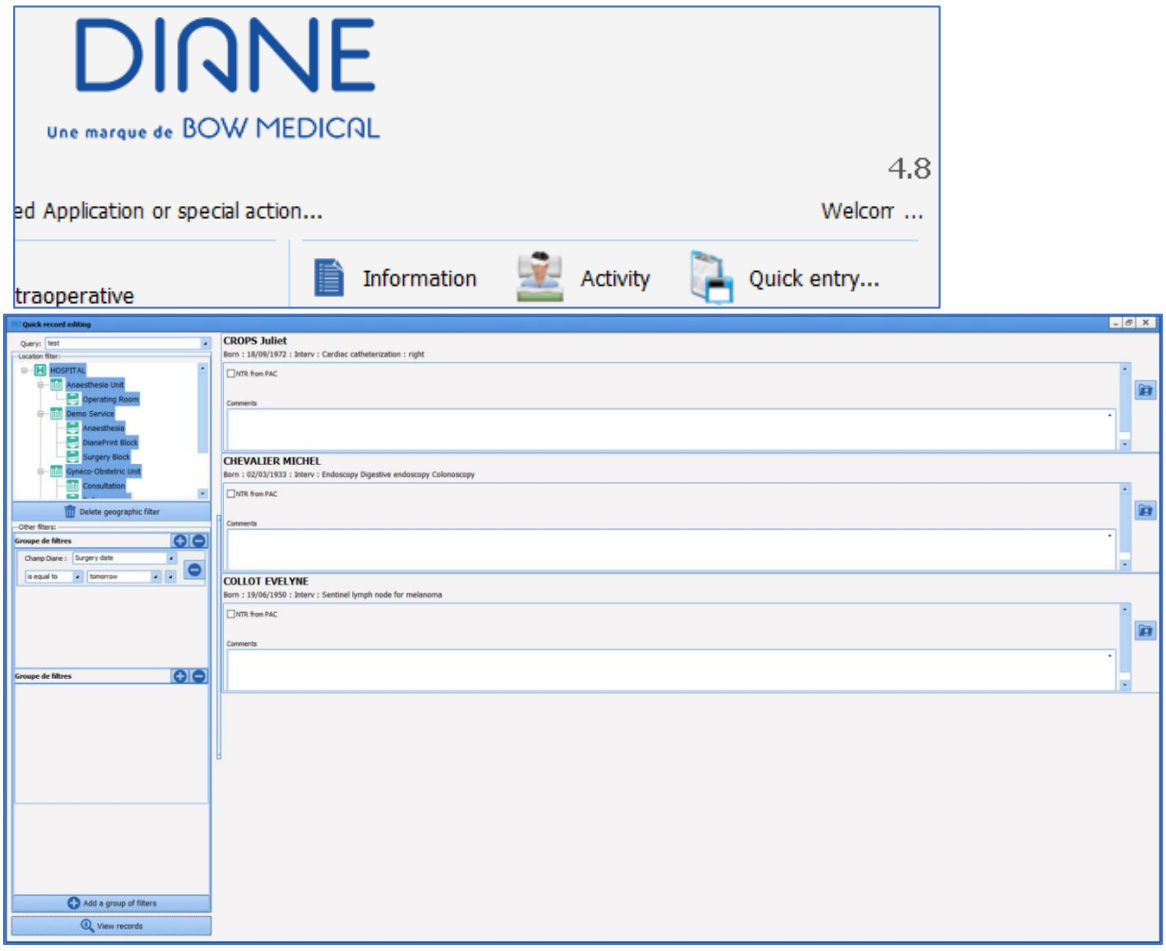
To see the identity status, hover the mouse over '**NHI**'.

2.6 The Quick entry module

The DIANE portal **Quick entry** module lists the patient records and lets you interact directly with them.

The Preoperative assessment is a typical query for this module: for example, you can list all the patients having surgery today and complete the Preoperative assessment from this list.

To access the **Quick entry** module, click on the DIANE portal **Quick entry** button.



1. Drop-down menu of the different patient queries configured. The first is the one proposed by default.

2. Location filters to restrict the list to certain units or OTs.

3. Filters relating to patient record data. You can change these filters to adapt a date or a number. In the example above, you can specify **Yesterday** instead of today.

4. When the query is selected and any necessary filters are applied, the results appear by clicking on **Display records.**

The list appears on the right. You then have access to these records:

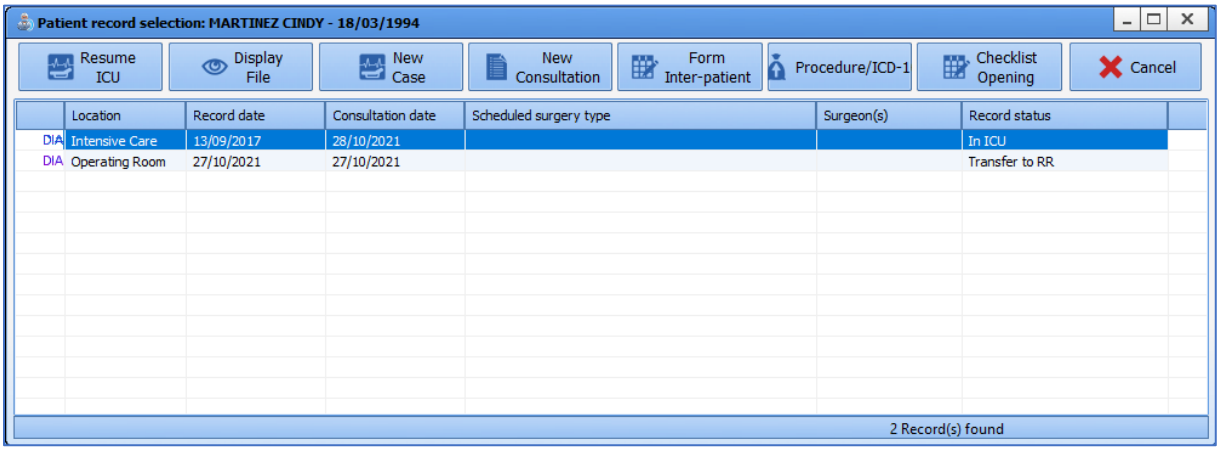
- Either to complete the proposed items directly,
- Or by clicking on , the record opens and you can see additional items before completing it.

When you exit the record, you will automatically return to the list.

3. DIANE ANAESTHESIA

3.1 Selecting patient records in anaesthesia

After selecting the patient, the following window opens to choose what you want to do with the patient record.



By default, patient records are sorted in a given way, showing surgeries not yet completed first. The following records are sorted by place and date, taking into account the status of the record.

The surgery selected by default is the one that is in the current OT or unit, and that is scheduled to start the soonest.

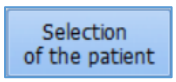
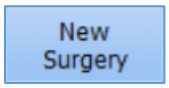
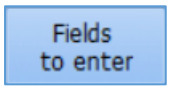
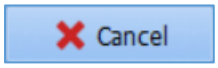
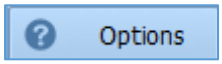
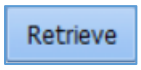
From this window, and by using the buttons in the header, you can:

- **Start the surgery**: this button is used to start the surgery not yet performed that is selected in this window. You can start the surgery by double-clicking on the line you want.
- **Resume the surgery**: this button lets you restart a surgery that started less than 24 hours ago.
- **View the surgery**: this button is used to view a completed surgery.
- **New surgery**: this button is used to start a new surgery without a related consultation.
- **New consultation**: this button is used to create a new consultation.
- **Inter-patient checklist**: this button gives access to the inter-patient checklist.
- **Procedure/ICD-10**: this button gives access to the Procedure/ICD-10 code entry form.
- **Safety checklist**: this button gives access to the safety checklist.

If the selected patient has no surgeries planned or performed, the user will be prompted to create a new surgery.
When you double-click on a surgery performed less than 24 hours ago, a message will appear suggesting to either resume this surgery or view it.
If you right-click on one of the lines corresponding to a surgery, a menu is available to **Start the consultation associated with this surgery**.

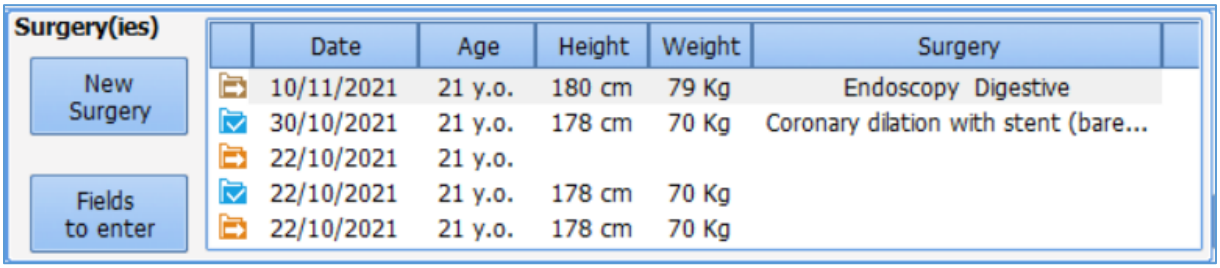
3.2 Preoperative assessment

3.2.1 Preoperative assessment buttons

Buttons	Function
	Lets you select a patient's record. See the '*Patient selection*' chapter.
	Used to start a new consultation for a new surgery for the selected patient. See the 'Scheduling a new surgery' chapter.
	Opens the **Fields to complete** window which highlights the fields considered important before closing the application. See the '*Important items and critical items'* chapter.
	Lets you save all the information entered (new items, changes made or items deleted from the selected patient's record). The consultation is saved automatically when you print or generate ICD-10 and procedure codes.
	Lets you exit the patient's record if the **Save** button is greyed out when you click on **Cancel**. If the **Save** button is active when you click on **Cancel**, you can cancel all information entered since the patient's record was last saved. A **Warning** window prompts you to confirm your choice. The **Yes** button in this window lets you keep the data you were about to delete. The **No** button cancels all the changes you have made to your patient's record since it was last saved. The **Cancel** button cancels your cancellation request.
	Used to print the consultation for the selected patient. A Print preview window opens first. See the '*Consultation printout*' chapter.
	Opens a context menu that lets you: - **Lock the** DIANE computer - **Change the user** - **Resynchronize** - **Change the password** - See the **Consultation help** - See the **About** window - **Exit** the Consultation application
	Opens the **Retrieval** window to retrieve all the data in the selected tab from a choice of previous consultations listed for a given patient.

3.2.2 Surgery(ies) pane

This pane, at the top of the application, displays a list of all the surgeries that the selected patient has already had during previous care in the **DIANE** software and lets you schedule a new surgery for the patient by using the **New surgery** button.



When a record is finished , by right-clicking on the line, you have a complete view of the surgery.

3.2.3 List of surgeries for the selected patient

The list of surgeries for the selected patient appears in the **Surgery(ies)** pane. Here, we can see the patient's **Age**, **Height** and **Weight** on the date of the surgery as well as the reason for surgery and **Date** of surgery.

Icon	**Date** column	**Surgery** column
Record open *The surgery has not been done or is in progress. The consultation can therefore be modified.*	Scheduled date of surgery if this has been entered OR Consultation date if the surgery date has not been entered	Surgery scheduled
Record closed *The surgery is finished and the patient is in the recovery room. The consultation can no longer be modified (unless you have exceptional access permissions).*	Actual date of surgery	Surgery performed
locked record Currently in RR Currently in OT Induction in progress *This record is locked on another computer (record already open or preloaded on a mobile device). You have read-only access to the record.*	Scheduled date of surgery if this has been entered OR Consultation date if the surgery date has not been entered OR Actual date of surgery if performed	Surgery scheduled or performed
Record not accessible *The surgery was performed or scheduled in another unit. You cannot view this record (unless you have exceptional access permissions).*	Scheduled date of surgery if this has been entered OR Consultation date if the surgery date has not been entered	Surgery scheduled or performed

OR

Actual date of surgery if performed

You can sort the list of surgeries by clicking on the column headings (**Date**, **Age**, **Height**, **Weight**, **Surgery**).

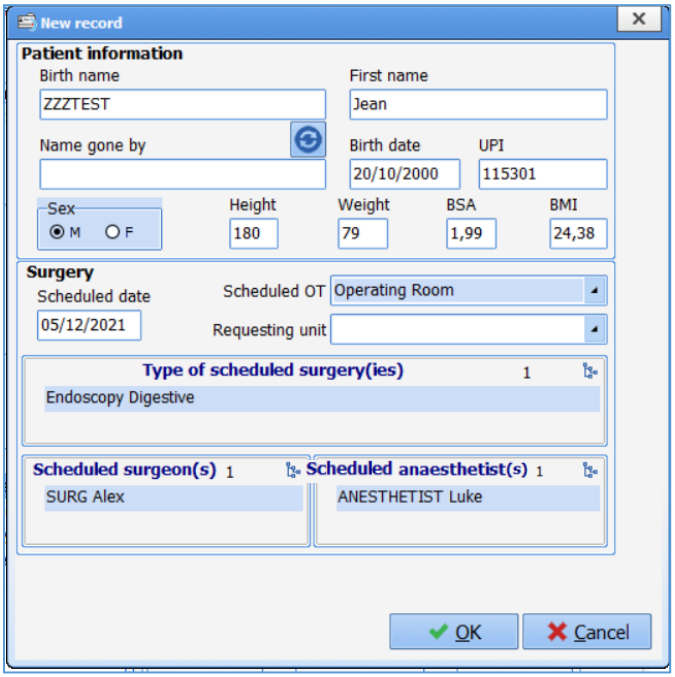
If the last consultation carried out is not selected, the background colour of this list will be orange.

You can view the surgery associated with a consultation by right-clicking on the surgery and selecting **See associated surgery**.

3.2.4 Scheduling a new surgery

When a patient's record is selected, click on the **New surgery** button.

When a new patient is created, the **Schedule a surgery** window opens automatically.



In this window you can complete the first fields (the **BSA (Body Surface Area)** and **BMI (Body Mass Index)** are calculated automatically).

When this window is opened, the operating theatre is, by default, the one where the computer is located.
Any change to this field will be kept during the same session for subsequent surgeries scheduled during the same session.

Click on the **OK** button or hit `Enter` on your keyboard to confirm this window.

The items are inserted in place.

After confirming this window, a confirmation message offers to automatically retrieve the history from the previous record.
If you click on **Yes**, the proposed action will be done: the **History/Treatments** tab is prefilled with the history from previous records.
If you click on **No**, only intraoperative and postoperative complications and previous surgeries performed with the **DIANE** software will be retrieved in the **History/Treatments** tab.

3.2.5 Main preoperative assessment tabs

The anaesthesia data relating to the selected surgery is accessible in a tabbed folder and grouped, by default, into nine main categories: **Administrative**, **History/Treatments**, **Clinical examinations**, **Paraclinical**, **Conclusion/Appointment**, **Outpatient**, **Accounting**, **Summary** and **Documents**.

NB: If you try to modify an old consultation record, a message will appear to tell you this. By default, this limit is set to 240 days.

3.2.5.1 *Administrative tab*

This tab contains all the administrative data concerning the patient and the details of the scheduled surgery.

These fields are filled in using the different methods seen in the '*Ways to enter data in DIANE*' chapter.

NB: If an interface is in place, the administrative fields can be filled automatically. Also, these fields may not be accessible to fill in.

3.2.5.1.1 Surgery(ies) performed component)

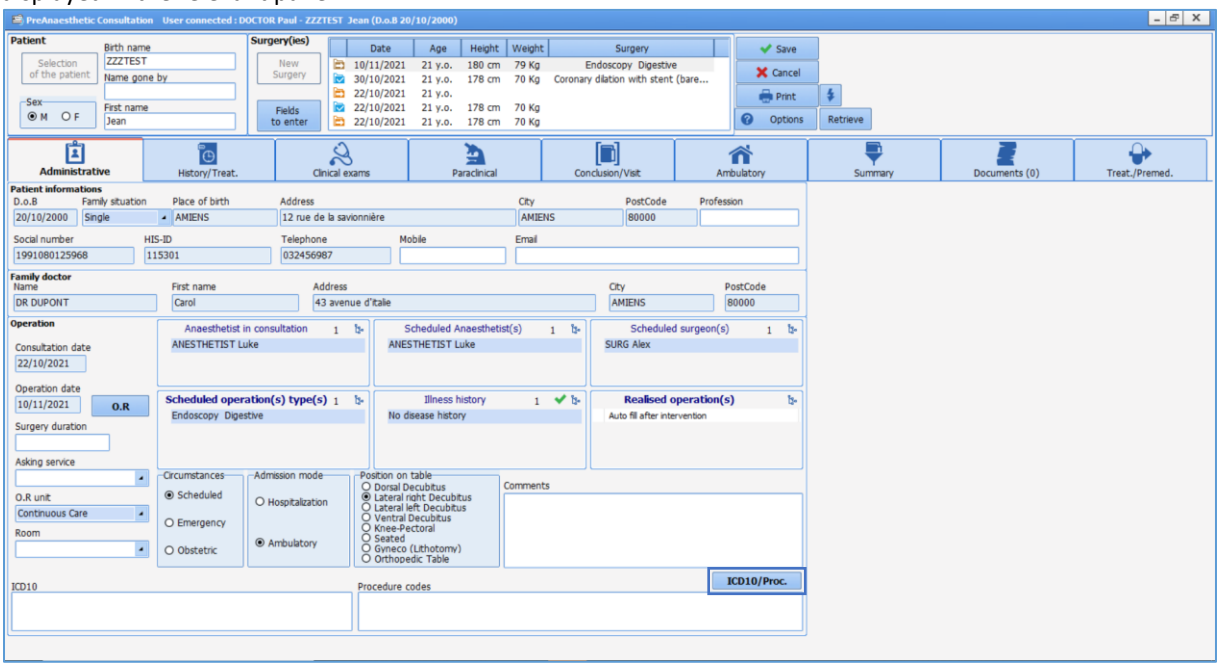
The **Surgery(ies) performed** field does not need to be completed. It will be automatically updated when your patient is in the intraoperative stage.
This lets you see the difference between the surgery scheduled and the surgery actually performed. Scheduled staff components

3.2.5.1.2 Scheduled staff components

Completing the **Scheduled anaesthetist(s)** and **Scheduled RNA(s)** during the surgery will automatically register them as present in the theatre.

3.2.5.1.3 Procedure/ICD-10 button

A **Procedure/ICD-10** button gives direct access to the entry form for ICD-10 and procedure codes. See the 'Procedures/ICD-10' chapter. You must click on the **Procedure/ICD-10** button for the retrieved codes to be displayed in the relevant pane.



3.2.5.2 *Treatment/Premedication tab*

This tab can be used in other modules. It is therefore dealt with in the 'Treatment/Premedication tab' chapter.

3.2.5.3 History tab

This tab generally groups together everything related to the patient's history.

Remember that the green ticks are used to indicate default items for this field (e.g. NTR, no surgical history, etc.). Indeed, it is better to have an NTR type item than no information, which could mean that the patient may not have been asked about their history.

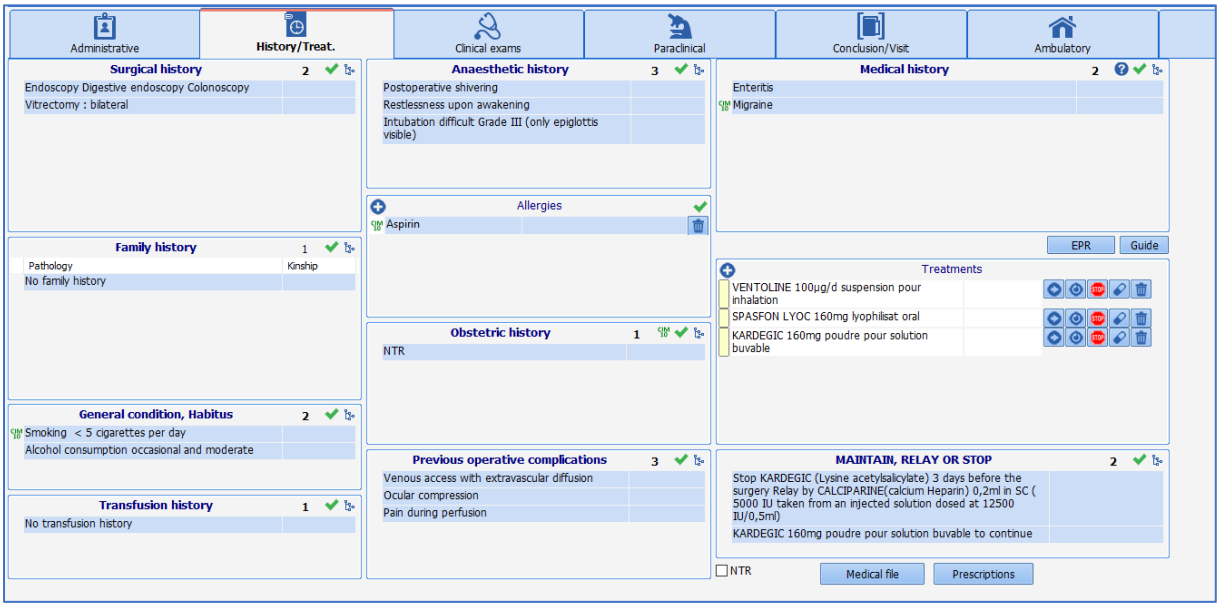
It is possible to send the data to the **Important items** field in the **Conclusion/Appointment** tab by right-clicking on the relevant item.

3.2.5.3.1 Surgical history, Surgical complications components

The **Surgical history, Previous surgical complications and Anaesthetic history** components are special components. They can be completed as normal but they also automatically retrieve the data from surgeries previously performed with **DIANE**.

3.2.5.3.2 NTR button

The **NTR** checkbox is used to fill in all the fields with a preset default item for a patient with little or no history.

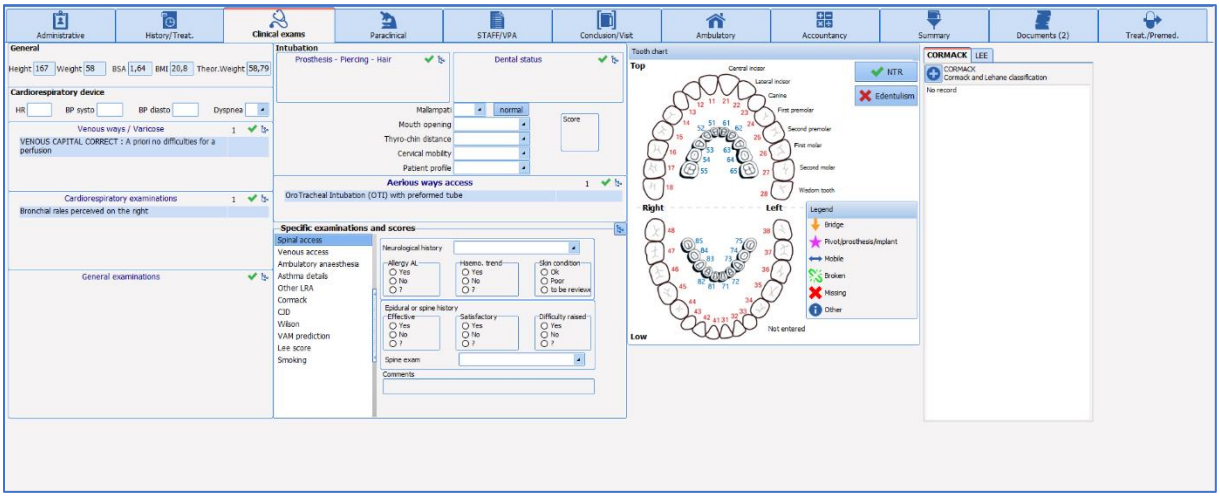


3.2.5.4 Clinical examinations tab

This tab is used to enter the patient's clinical examination on the day of the consultation.

You can use all types of consultation components. See the '*Ways to enter data in DIANE*' chapter.

Detailed entries are customizable and can be activated by clicking on in the relevant tab. First you will be asked to save the consultation.



3.2.5.4.1 Intubation score

This score is calculated using the fields on the side: **Mallampati**, **Mouth Opening**, **Thyromental Distance**, **Cervical Mobility** and **Patient Profile**.
The score is between 5 (minimum score obtained by clicking on the **Normal** button, located opposite the **Mallampati** score) and 14. When this score is red, it has exceeded the critical threshold of 7.

3.2.5.5 Paraclinical tab

This tab is useful to request lab tests and specialist consultations and enter the results.

You can use all types of consultation components. See the '*Ways to enter data in DIANE*' chapter.

The most frequently recurring assessments are shown (configured by the site's key user) and accessible via checkboxes. Once you have made your selection, the **Generate** button lets you generate the prescription form for the assessments based on what has been ticked.
You can also create letters for specialist consultations.

You can include an assessment that is not configured with the configuration you are using, by clicking on the button at the top right of the **Other assessments** pane. Once an assessment that does not belong to your configuration is completed, it will still be visible from the patient's consultation.

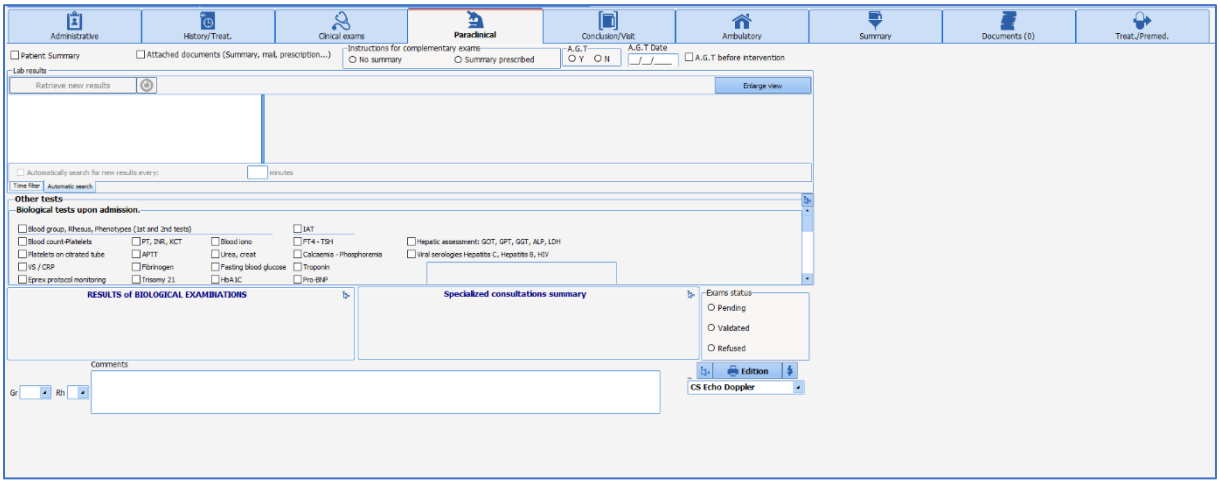
3.2.5.5.1 Generate button

Clicking on the button lets you directly print the selected letter without going through the preview window.

The button lets you print several letters at the same time. Select the letters you want to print by ticking the boxes then click on the **Preview** button if you want to preview these letters first or on **Print** to print without a preview.

NB: Lab results can be automatically retrieved from the lab results server if an interface is set up.

NB: All typical prescription letters and assessments can be fully configured by your site administrator. They are configured by unit, operating theatre, room, etc.



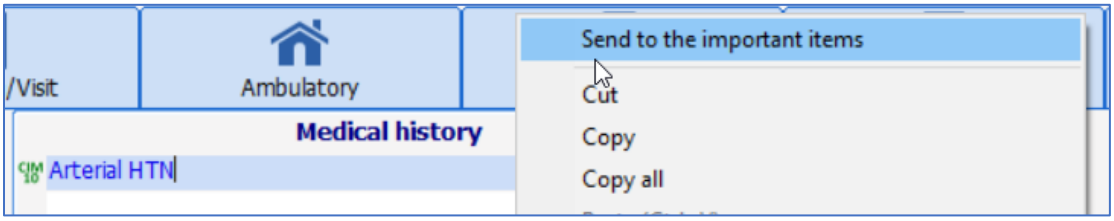
3.2.5.6 Conclusion/Appointment tab

In this tab, it is customary to fill in all the items relating to the anaesthesia strategy but also everything relating to the surgery authorizations, benefit/risk information, etc.

This tab has a Printouts button to manage the printing of surgery authorizations but also all types of documents such as informative documents, consent documents, etc. They are managed and made available by your key user. This button functions in exactly the same way as the one in the previous tab (see the 'Generate button' chapter).

3.2.5.6.1 SUMMARY/Important items component

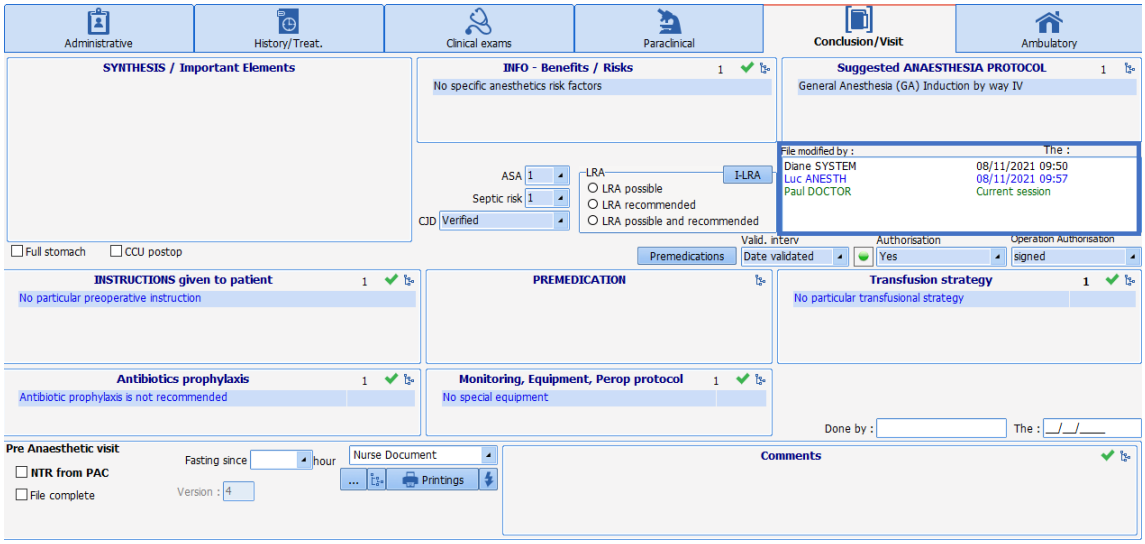
The **SUMMARY/Important items** component summarizes all the items during the consultation considered important. Indeed, for each component of the consultation, you can right-click to send items to this **Conclusion/Appointment** tab.
You can send a specific complete examination or a complete assessment to the table of important items by right-clicking directly on the name of the examination (**Clinical examinations** tab) or assessment (**Paraclinical** tab).



3.2.5.6.2 'Record edited by' component

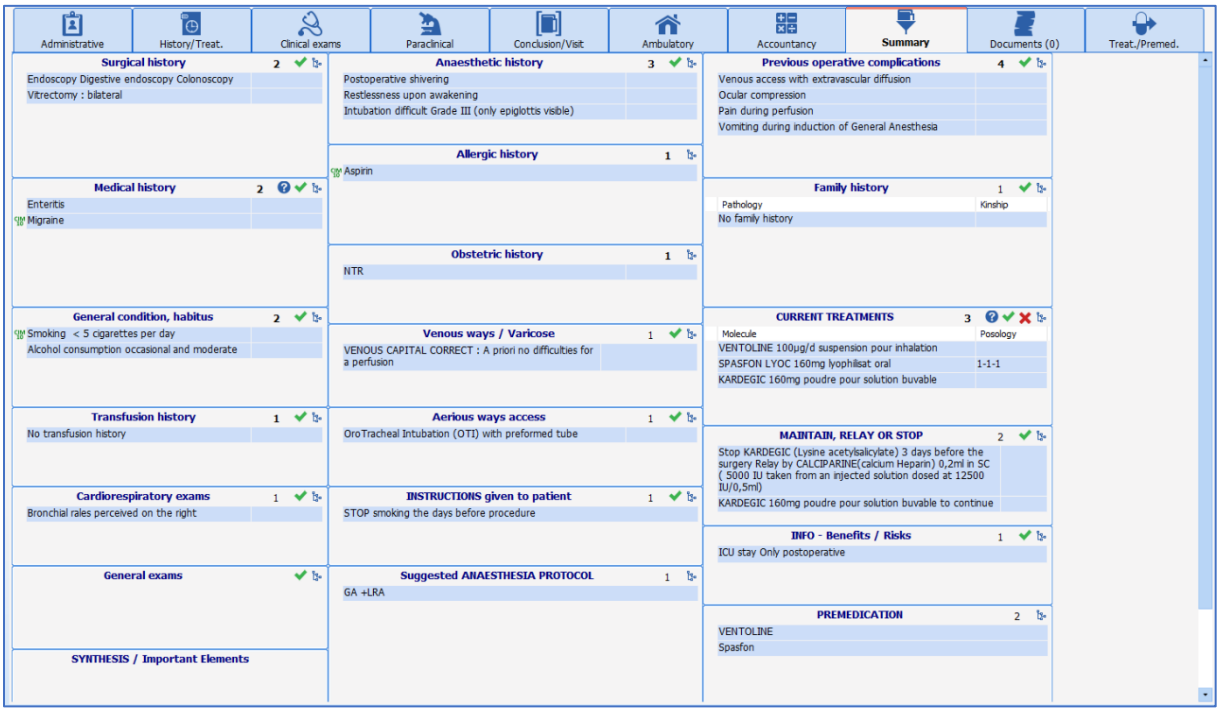
A **Record edited by** pane shows you the names of all the caregivers who have edited the consultation record. A different colour is allocated for each new session opened. This pane is completed automatically.

A version number, also present on the printout of the anaesthesia record, lets you know if the printed version is the same as the one that can be viewed and modified on the computer.



3.2.6 Summary tab

This tab lets you see all the components of the consultation on one page. It is fully configurable. These components are mirrors of those used in all of the other tabs.



NB: You can record your information directly from this tab.

3.2.7 Staff meeting/Preoperative assessment tab

It is possible to have a tab just for staff meetings and/or preoperative assessments.

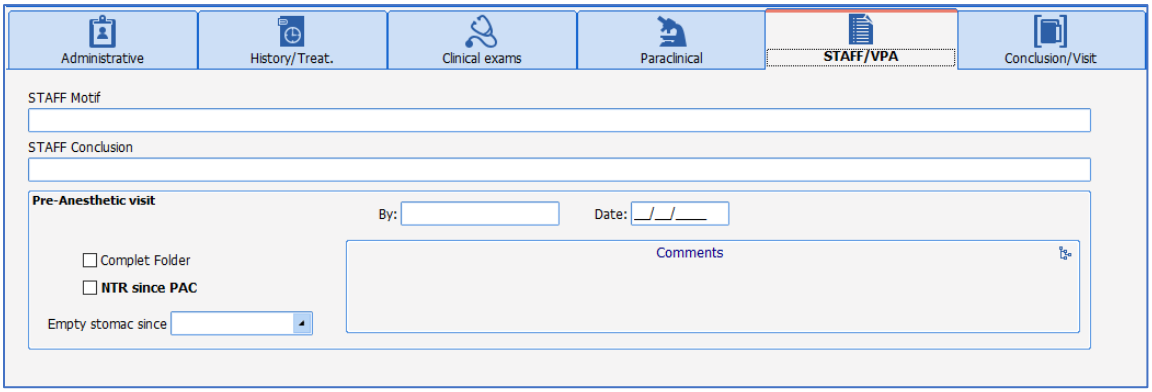
3.2.7.1 Anaesthesia staff meeting

This part can be used to track the items of the staff meeting (the reason for the meeting and conclusion).
Via the quick entry module, if the surgery has been confirmed on the **Record requiring staff meeting** status, you can find records that need to be reviewed by the team.
You must remember to change the status to **Staff meeting held and record confirmed** so that these records are no longer extracted during the next query.

3.2.7.2 Preoperative assessment (Preop)

Information from the Preoperative assessment can be entered in different ways. The organization can be configured by the key user.

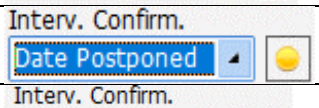
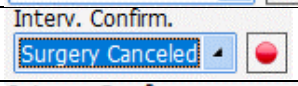
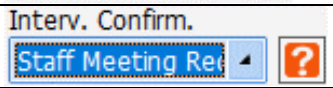
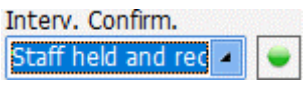
When this part is filled in using the relevant fields (**Complete record**, **NTR from the Preop**, **Comments**, **Fasting from…**), the **Done by** and **On** components are automatically entered with the name of the doctor who entered the information and date of entry.

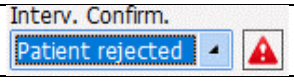


3.2.8 Exiting the patient consultation record and critical fields to fill in

3.2.8.1 Confirmation and status of the record

There are six possibilities for validating the surgery.
Each possibility is associated with a visual icon.
This confirmation will let you find these records via the quick entry module to complete them if necessary (record requiring staff meeting) but also manages alerts when the record is opened in the operating theatre.

Status	Icon	Effect in intraoperative stage
Date confirmed		
Date postponed		
Surgery cancelled		
Staff meeting required		
Staff meeting held and record		A window tells you that a staff meeting has been held for the record.

confirmed		
Patient rejected		A window appears telling you that the patient has been rejected.

The status can be chosen in two ways:

- Either by choosing from the proposals in the **Surg. valid.** drop-down menu,
- Or by clicking on the icon. The order is then as follows: no status ⇨ **Date confirmed** ⇨ **Date postponed** ⇨ **Staff meeting required** ⇨ **Staff meeting held and record confirmed** ⇨ **Surgery cancelled** ⇨ **Patient rejected** ⇨ **No status** _, ⇨ etc.

3.2.8.2 Important items and critical items

When the consultation is saved or when you click on the **Fields to complete** button, a window opens.
This window lists the fields considered important or critical. A colour system is used to distinguish between fields that are not very important (green circle), important (yellow circle) and very important (red circle). If red circles appear in the **Fields to complete** window, the record cannot be exited without these fields being completed.

NB: The level of importance is configurable. Only site administrators can modify the names of the fields to complete and their order of importance.

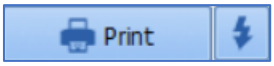
If you click on , the tab where this field is located will be displayed on the screen for you to complete it as normal.

You can also select the desired item directly from the drop-down menu in the window.

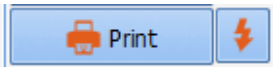
The button in front of lets you quickly insert a value. These quick entry values are fully configurable.

3.2.9 Consultation printout

Once the consultation is finished, the **Anaesthesia Report** is generated according to the settings entered by key users.
You can print the report directly, display the print preview or send it directly to the Patient Record.
You will need to click on the button to print:

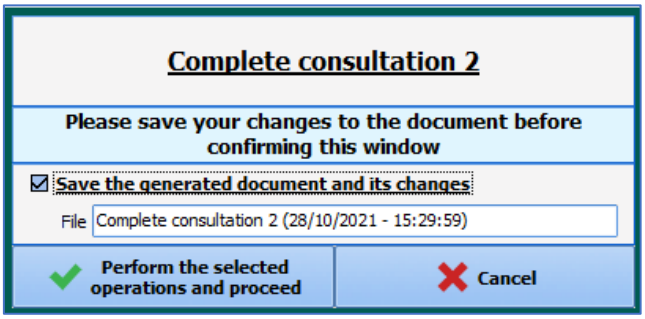


As soon as the document is generated, the colour of the button changes from blue to orange. In addition, if you hover over it with the mouse, you can see the date on which a report was last generated.



Each time you request a printout, the window below opens. This lets you see which document will be printed. You can choose to save the document, in which case it will be stored in the **Documents** tab. It can also be exported.

If this window appears, the document is exported or saved after clicking on the **Perform the selected operations and proceed** button.



On the right, the button sends the report directly to the printer then opens the window above.

3.3 Using DIANE on a laptop OFFLINE

You may need to see a patient in a remote location, for example perform anaesthesia at a site not equipped with the software. With a laptop computer that has the **DIANE** software, you can load the record onto the computer, carry out the consultation, the preop assessment, surgery, etc. then put it back on the network.

To do this, different steps must be carried out:

- The patient records are preloaded onto the computer.
- The relevant procedures are carried out.
- The data is resynchronized.

3.3.1 Preloading patient records

Before working offline, the relevant patient records must be loaded onto the computer.

To do this, you must search for the patient record then right-click to select **Load in full access mode**.
This loads and locks all the data from the record onto the computer. This record will be accessible only from this computer in read and write mode while offline.

Lock: this option places a lock on the patient in the database, preventing other users from changing data in the patient's record. Locked records show the lock symbol in the **Patient selection** window.

The selected records now appear in the **List of locally loaded records** pane.

When the upload is complete, you can close this window and follow the relevant procedure. The computer can be disconnected from the network.
Run the relevant application, ticking **Force to offline mode** in the login window. Forcing the application to work offline prevents the software from searching for the network.
In offline mode, the application is red. See the '*Offline mode and connections between computers*' chapter.

You can now carry out the necessary actions: preoperative assessment, consultation, complete surgery, etc.

3.3.2 Data resynchronization

When the procedure is finished, you must reconnect the computer to the network. Data resynchronization is proposed.

When you start up a **DIANE** application, the records found on the laptop are automatically transferred to the central server.

Only site administrators can unlock one or more patient records (if a laptop is lost, for example). In this case, all data inserted during the procedure will be considered lost.

NB: To load and unload patients from the laptop, the network connection must be working.

3.4 Intraoperative and postoperative modules

The **DIANE Anaesthesia** **intraoperative** and **postoperative** modules let you document the surgery in induction, the OT or recovery room. The most important tab in these modules is the **MONITORING** tab in which all the items entered in the record can be found.

The use of this module is similar in induction, in the local and regional anaesthesia room, operating theatre

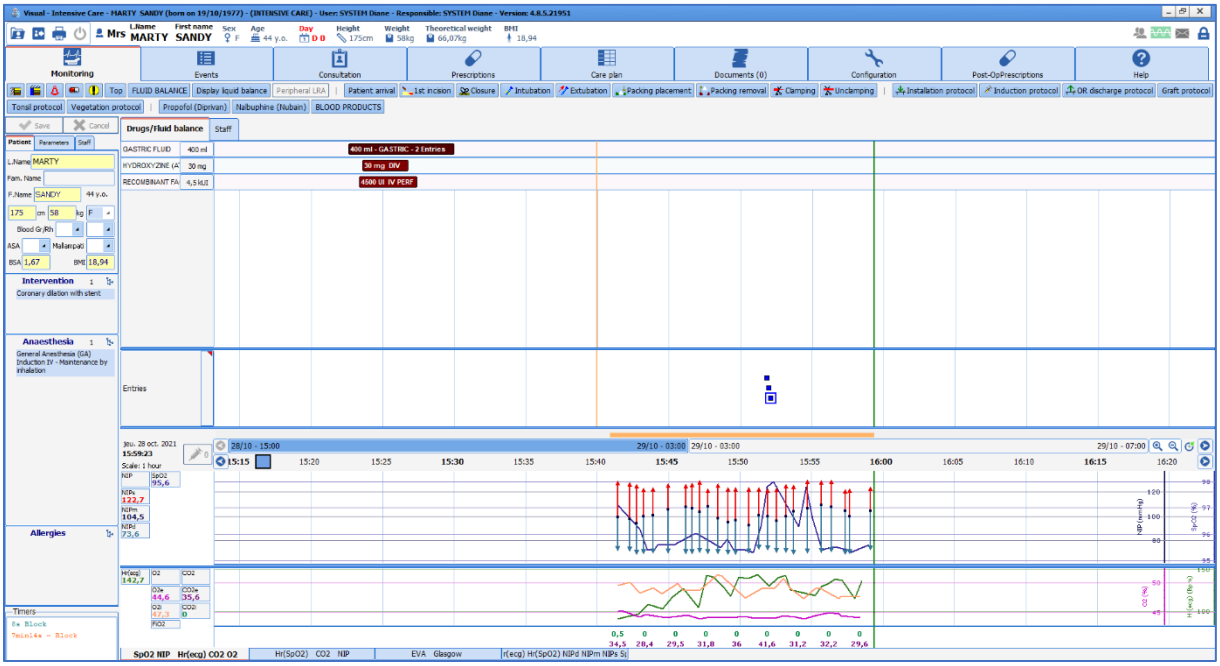
and recovery room. The differences will be seen at the end of the chapter.

The display is adapted to the work area where the computer is located.

Medication orders for the recovery room and postoperative units are now managed taking into account the developments in place for intensive care, making it possible to generate structured medication orders (see the '*Medication order tab*' chapter).

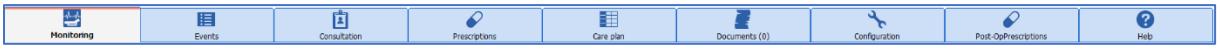
3.4.1 General appearance of the application

The application is divided into tabs, the main tab being the **MONITORING** tab.



Above the tabs there is a ribbon containing information about the patient (marital status, age, weight, height, BMI, etc.).

Just below, there is a series of tabs giving access to different information detailed in the following chapters.



Below the tabs there are buttons for quick access to enter data.

On the left is an area with other types of tabs. The anaesthesia record appears in the middle.

3.4.1.1 Intraoperative and postoperative buttons

The table below shows the meaning of the application's different buttons.

On the left, there are buttons to open or exit the record.

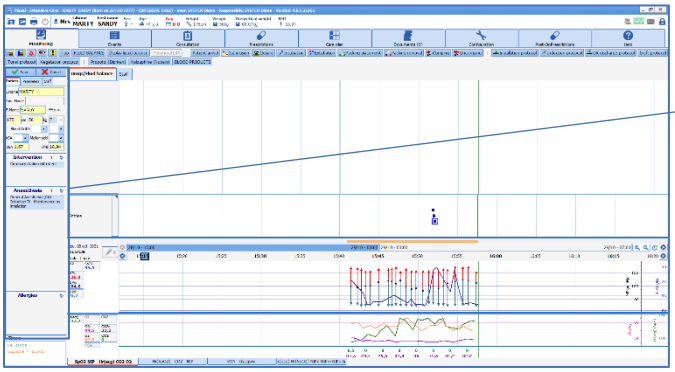
Button to open record

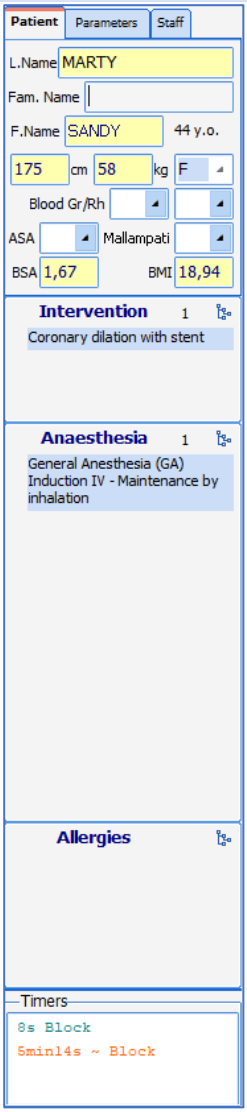
	Button to exit record
	Warning telling you that important actions have not been done. 'Important items reminder' button.
	One or two printers are used to manage default printing, but also specific printing (see the 'Centralized printing' chapter.).

On the right there are other buttons:

	Patient-oriented email client
	Status of data transmissions between biomedical devices and the software
	Warning telling you that medication orders are awaiting confirmation
	Internal messaging
	Internal email client Button to log out while leaving the patient record open

3.4.1.2 Patient subtab





This tab summarizes important patient information. This data is retrieved from the consultation.

These fields are writeable during and after surgery to be able to readjust what was planned.

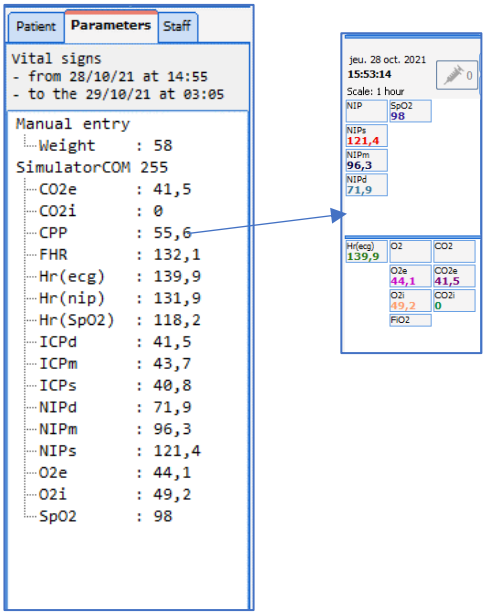
The name of the surgery comes from the consultation's **Surgery scheduled** field. When the record is closed, the **surgery performed** field will be completed.

NB: when you exit the software or close the record, this tab is automatically saved. It is also possible to save manually by clicking on the **Save** button above the **Patient** and **Parameters** tabs.

3.4.1.3 Parameters subtab

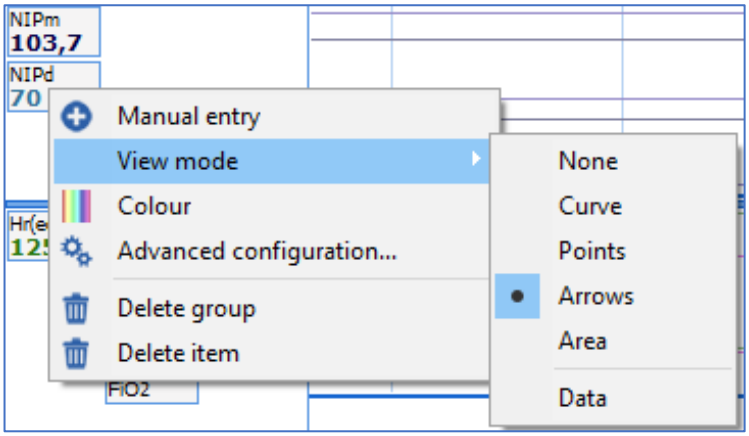
This tab shows you the data collected from biomedical devices and data entered manually.

It is this tab that will allow the user to customize their anaesthesia report. Indeed, you can drag and drop the relevant items to the appropriate place. They are then displayed with the default graphical configuration.

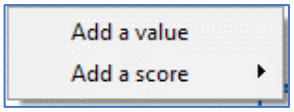


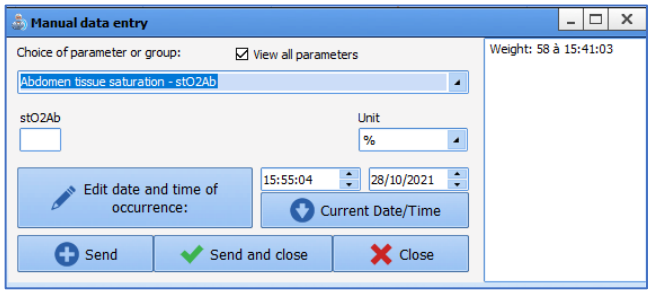
Once in place, you can right-click on the item to configure the type of display (curve, area, arrow, etc.) but also the tabular (= numerical) view or colour, etc.

Feel free to personalize your anaesthesia record. The data is recorded the same way regardless of the display used. Each user can therefore put the data they need on the screen according to the surgery, patient and conditions.

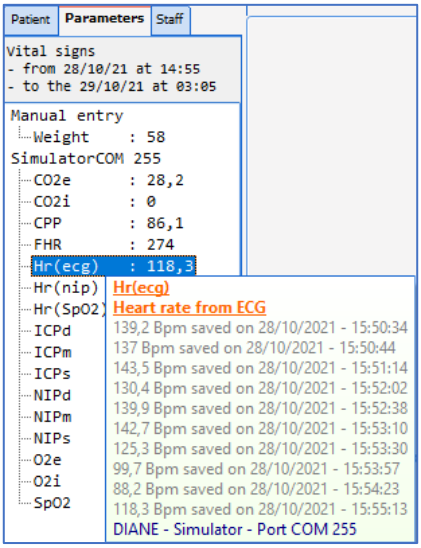


By right-clicking in the pane you can add a score or value manually.





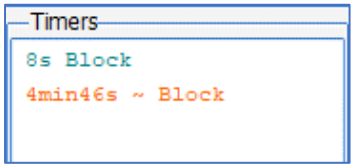
When you hover the mouse over it, you can see the last 10 values sent.



3.4.1.4 *Timers*

This pane displays the timers triggered by certain events. There are two types of timers:

- Configurable automatic timers, with or without alerts.
- Manual timers.



3.4.1.4.1 Purpose of timers

Timers can be used for two purposes:

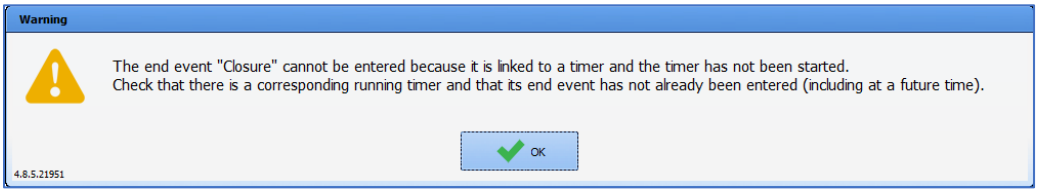
- To remind you of an action that needs to be repeated (repeat antibiotic injection, tourniquet time, etc.) via a pop-up.
- To simplify the entry of an action completed.

Indeed, triggering an action associated with a timer gives easy access to the closing event (see the '*Different ways to enter data during monitoring*' chapter).

3.4.1.4.2 Automatic timers

Three items characterize an automatic timer: its name and its starting and stopping conditions. The **Intubation** timer is started by the **Intubation** event and will be stopped by the **Extubation** event. An alarm can be generated with an automatic timer.

NB: A **Timer warning** message is generated when the event ending the timer is entered before the event starting the timer.



3.4.1.4.3 Manual timers

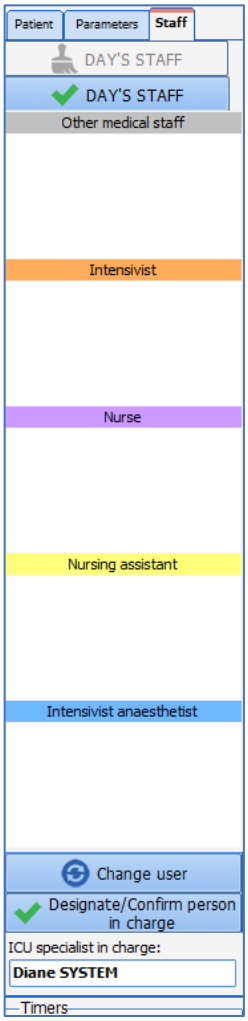
If you right-click in the **Timers** pane, at the bottom left of the **MONITORING** tab, a menu is displayed to start a new timer manually. The **New timer** window opens for you to name the timer and choose the time interval between warnings, if you want warnings to be generated for your timer.

Right-clicking on a manual timer opens a menu that lets you **Stop**, **Start the timer**, or configure the time interval between warnings.

This is particularly useful for managing repeat injections of antibiotics or for clamping times for example.

3.4.1.5 Staff in the OT/Doctor in charge

This tab is used to say which staff is present in the operating theatre.

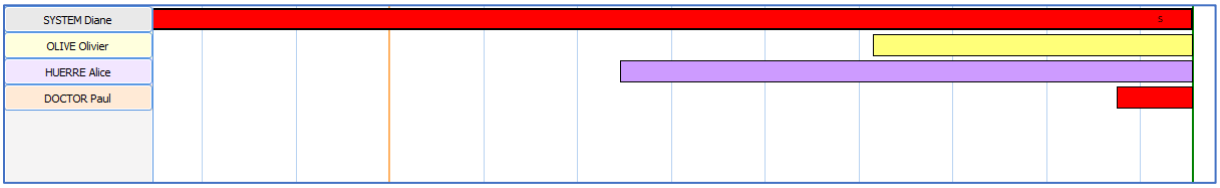


The **Today's staff** button at the top lets you say that the staff currently entered will be the staff for the current day. The staff will then be entered automatically for the next records.

At the bottom of this tab there is a **Designate/Confirm person in charge** button to name the doctor in charge of the anaesthesia.

This information can also be found by using the tab behind the drugs, which gives a different view of the people present.

These fields are currently not configurable.

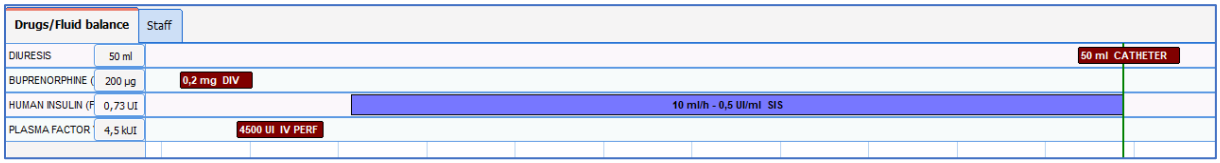


3.4.1.6 Drugs/Fluid balance ribbon

The **Drugs/Fluid balance** ribbon lets you enter products administered but also fluid loss such as bleeding, transepidermal water loss, urine output, etc.

The green vertical bar represents the current time.

The different ways to enter a product or output will be shown in the '*Different ways to enter data during monitoring*' chapter.



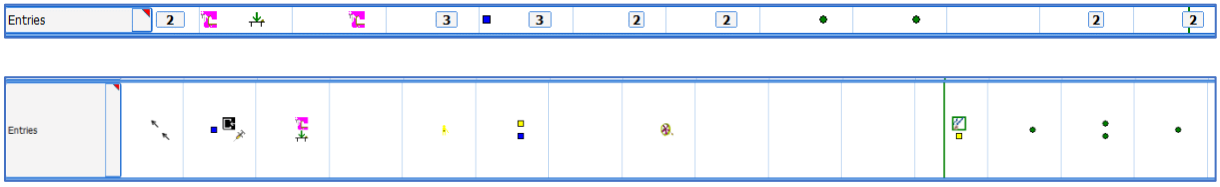
3.4.1.7 Events input pane

Located between the **Drugs/Fluid balance** ribbon and the parameter chart pane, this pane contains icons representing all events, consumables and scores that have been entered.
This pane tends to be narrow. When two items are entered for the same time, they overlap and a number replaces the icons. If you hold the **CTRL** key and click on the number they will be separated.

It is also possible to expand the pane by placing the cursor on the blue line at the top or bottom.

If you hover the mouse over a marker on the line you will see a tooltip showing the event entered and the time of occurrence. The same applies for drugs.

You can change the time of occurrence of an entry by dragging and dropping the marker to the relevant time in the input pane. You will be prompted to confirm the change. You can also delete an entry by right-clicking on it.



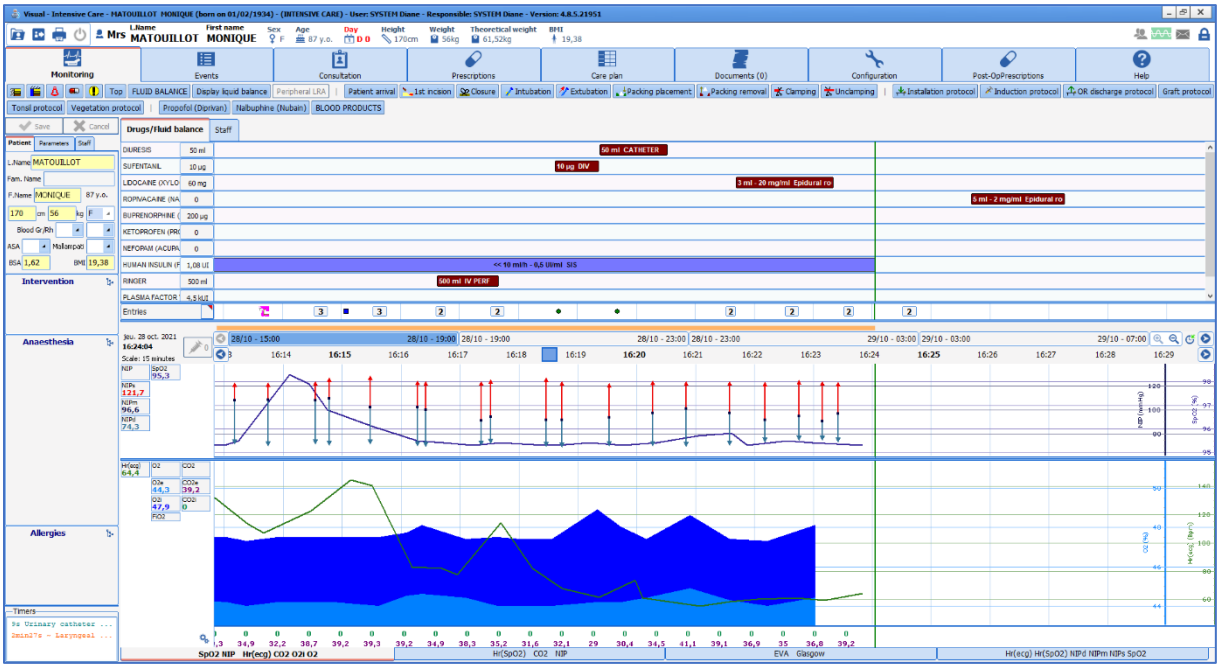
The various ways of entering a product or output will be discussed in the '*Different ways to enter data during monitoring'* chapter.

3.4.1.8 Parameters chart

The parameters chart is synchronized with the time bar. Parameters can be entered automatically by connecting biomedical devices to the computer or entered manually.

A chart pane can include as many parameters as you want. There are three different pages accessible using the tabs at the bottom of the page.

The size of the 3 chart panes can be changed. To do this, drag and drop the **blue line** separating each of the panes to change the size of the chart pane. Your cursor should look like this .



3.4.2 Important actions

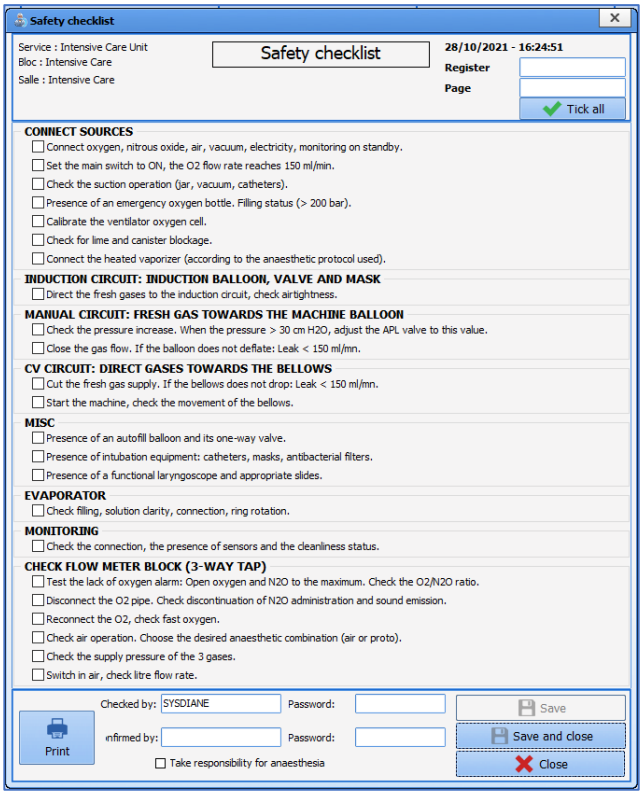
When configuring the software, some items can be made mandatory. The **Safety Checklist** (or opening checklist) is adapted to each anaesthesia site and you are prompted to fill it in when opening the software. In the same way, inter-patient checklists can be offered.

3.4.2.1 Entering and confirming the operating theatre Safety Checklist

As soon as the software is opened, you are prompted to complete the safety checklist.

In an emergency, you can skip this step by clicking on **No**. It can be completed later during the surgery and will be proposed automatically when the next record is opened, until it is completed. During the surgery, it can be accessed via the important items reminder button (see the *' Intraoperative and/or postoperative buttons'* chapter). It is also accessible via the **Safety checklist** button in the Button **Configuration** tab and in the patient record selection window.

Filling in this form is simplified by checkboxes and a **Tick all** button.



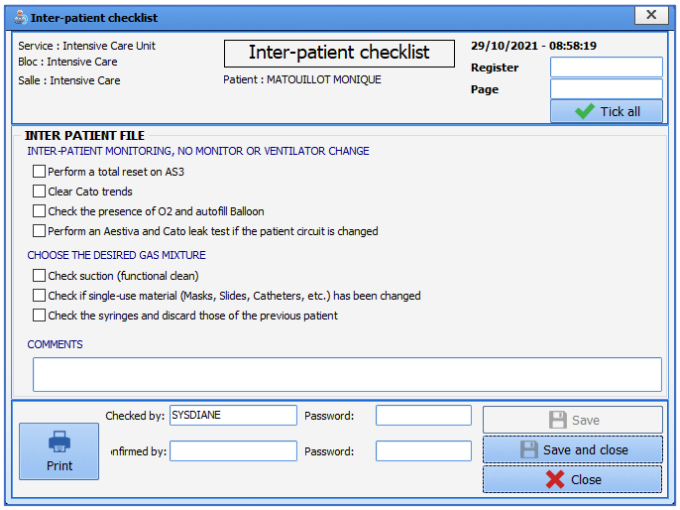
To confirm the entry, the person logged in must retype their password in the **Checked by** box. A medical profile in the **Confirmed by** box will confirm.
Permissions are managed by the site's key user.

The Safety checklist must be completed every 24 hours. It is possible to set the time from which it is proposed (operating theatre opening time, for example).

NB: The Safety checklist can be configured entirely by your site administrator. It is configured by unit, operating theatre, room, bed, etc.

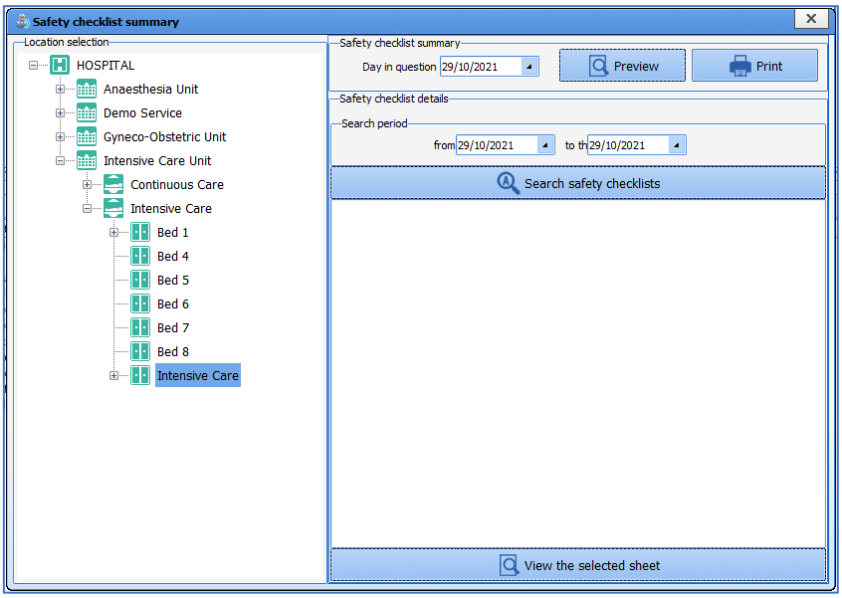
3.4.2.2 Entering and confirming the Inter-patient checklist

Between each patient, a message prompts you to complete the inter-patient checklist.
This checklist is completed, confirmed and printed in the same way as for the safety checklist.



3.4.2.3 Safety checklist summary

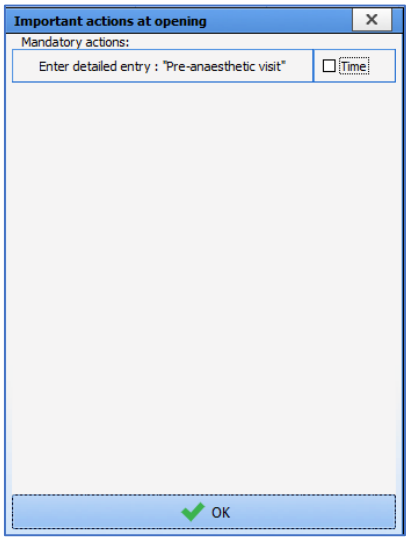
In the configuration tab, there is a button to access a Safety checklist search engine.
You can search for the Safety checklist by site, date, etc.



3.4.2.4 Other important actions

Your key users can set items as mandatory if they wish. These items are often chosen from official indicators to improve the quality and safety of care to ensure that medicolegal information has been entered (RR departure score, complications, pain assessment, name of the doctor in charge, preop entry, etc.).

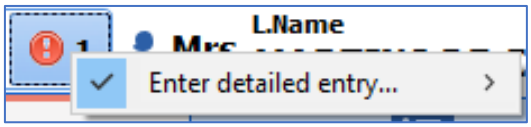
You can determine that a detailed entry is needed when a surgery starts (e.g. Preop assessment when it is entered during the operation). In this case, you are prompted to enter the information as soon as the patient's record is opened. This action can be postponed. It will be accessible in the important events reminder button.



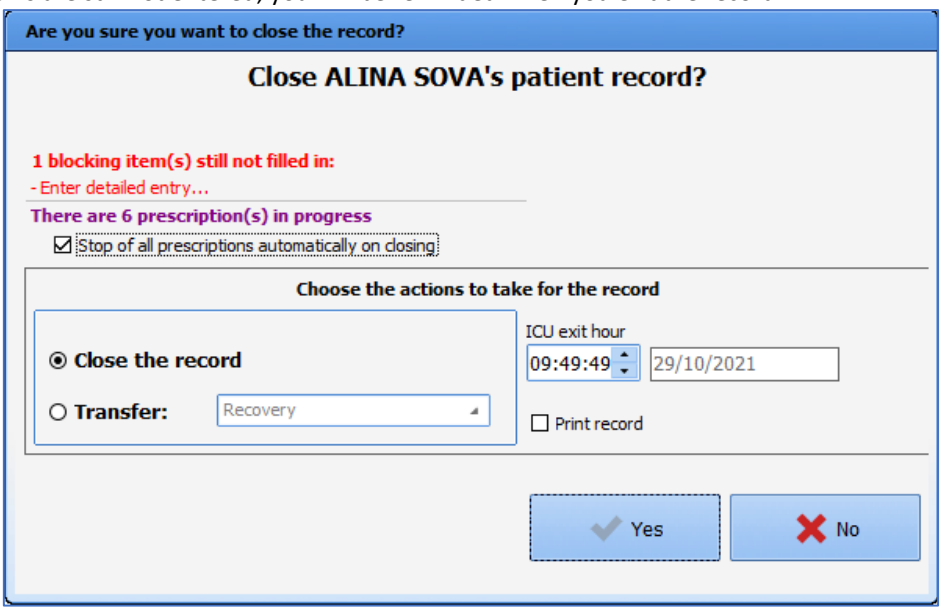
To complete the detailed entry, simply click on the relevant line.

If the **Postpone** box is active, you can enter this item later by clicking on the **OK** button.

If the **Detailed entry** is not filled in, a reminder will be given in the 'important events to enter' reminder button. By clicking on the button you can see and then enter items considered important.



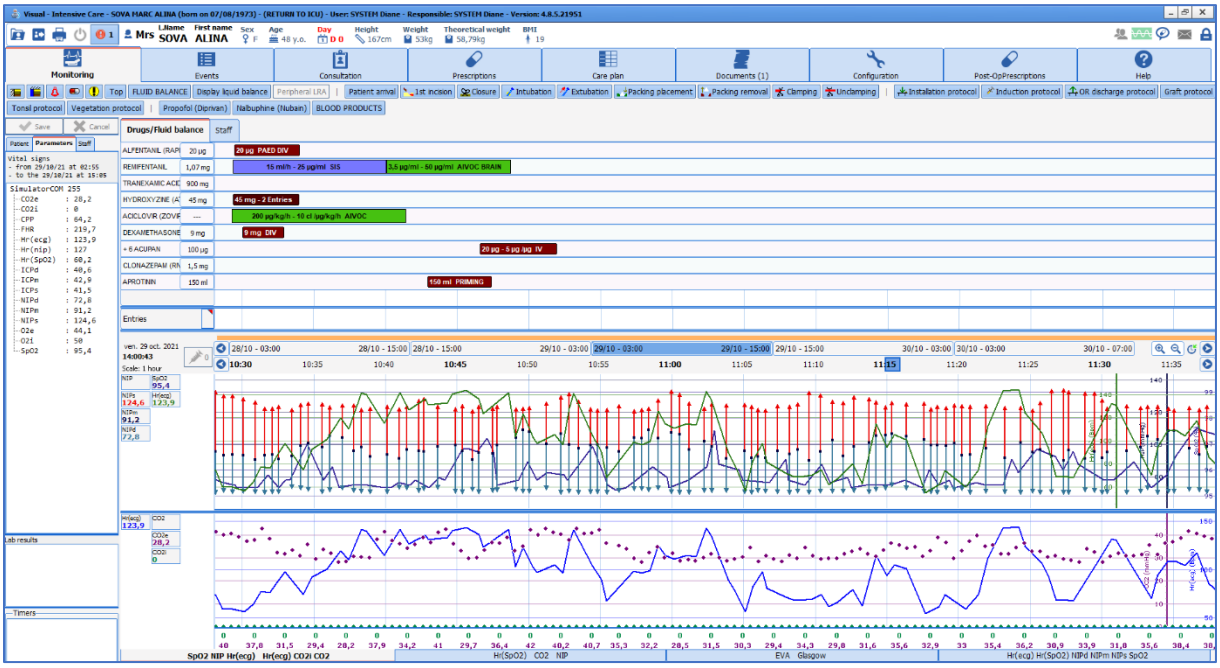
If these items are still not entered, you will be reminded when you exit the record.



3.4.3 Monitoring tab - anaesthesia record

Intraoperative and postoperative monitoring lets the user document the record as the surgery progresses.

All the information can be entered by choosing the corresponding entry in the menu that appears when you right-click on the events area.



If you hover the mouse over a marker on the line you will see a tooltip showing the event entered and the time of occurrence. The same applies for drugs.

NB: The monitoring sheet is preconfigured by key users. It can be adapted by the user during the procedure.

All the data entered and saved will be associated with the record even if the data is not configured for the display at the time of the procedure.

3.4.3.1 Different ways to enter data during monitoring

There are different data input methods for each item. Each method will take the item to where it should be. These different input methods are detailed in the following chapters. Different situations call for different methods.

Events and drugs can be entered in real time, in advance or afterwards.

You can change the time of occurrence of an entry by dragging the marker to the relevant time in the input pane. You will be prompted to confirm the change. You can also delete an entry by right-clicking on it.

You can also change the time of occurrence of the entry or delete it using the **Events** tab (see the '*Events tab*' chapter) or using the specific buttons **Change an event**, **Delete an event**, **Change a drug** and **Delete a drug**.

3.4.3.1.1 Events, patient environments, complications and consumables

These items are accessed by right-clicking in the event input bar.

Events: This section contains events relating to anaesthesia (Induction, Intubation, etc.), surgery (first incision, clamping, etc.). The symbol is used for events. Entering events is easy. Simply browse in the drop-down context menu. Move the mouse cursor onto **Events**, then over to the event you want to enter. Only the last item of each branch will be saved.

Patient environments: You can insert all items concerning the patient such as position, type of ventilation, type of IV administration, etc. The symbol is used for patient environments where the patient's position is inserted. Patient environments are entered the same way as events.

Complications: All complications, whether allergy-related, cardiovascular, etc. can be inserted. The ! symbol is used for complications. Any complications that you have inserted during the surgery will be automatically retrieved when you schedule your patient's next operation. Complications are entered the same way as events.

Consumables: You can enter all the consumables used during the surgery such as compresses, needles, catheters, etc. The ▢ symbol is used for consumables. Consumables are entered the same way as events, apart from the fact that the last two items will be saved, rather than just the last one.
You can insert an event, a patient environment, a complication or a consumable that is not in the configured lists of your unit, your operating theatre, your room, etc. but which was created in the hospital's configuration by clicking on **Other choice…**

You can configure automatic event entries in the configuration tool when opening/exiting records (OT arrivals, OT departures, RR arrivals, RR departures, return to OT, etc.) from the **Automatic events when a record is opened and exited** section of the **Display settings** tab in the configuration tool.

NB: All of these lists can be configured entirely by your site administrator. They are configured by unit, operating theatre, room, etc.

3.4.3.1.2 Time markers

You can insert a time marker using the specific **Enter a time marker** button.

A **Time marker** is an unspecified event that can be entered to mark the time of an important event. This lets you pinpoint the exact time of a problem, such as a complication, and continue to care for your patient. The symbol is used for a time marker on the markers line. You must then assign the corresponding event to this time marker by right-clicking on it

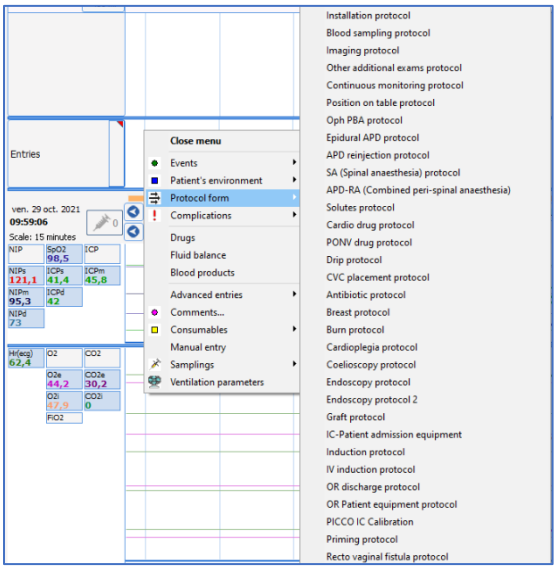
Please note, if the time marker is not renamed before the patient record is exited, it will not be saved.

3.4.3.1.3 Multiple entries

Multiple entries are particularly useful at certain key times for anaesthesia (patient's arrival, induction, when patient wakes up, etc.), when a lot of information has to be entered in a short time.

Multiple entries are accessed via buttons at the top of the application and/or by clicking in the **Entries >> Multiple entries** bar.

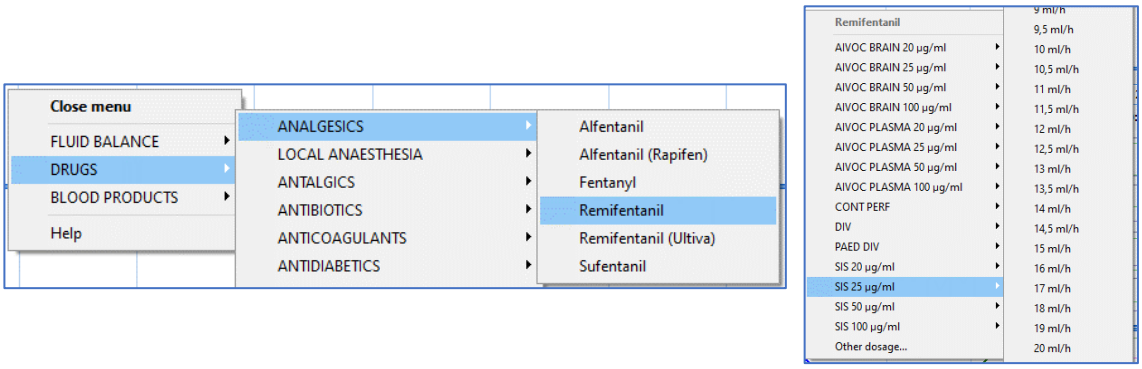
To use multiple entries, see the 'Multiple entries' chapter.



3.4.3.1.4 Drugs, fluid balance and blood products

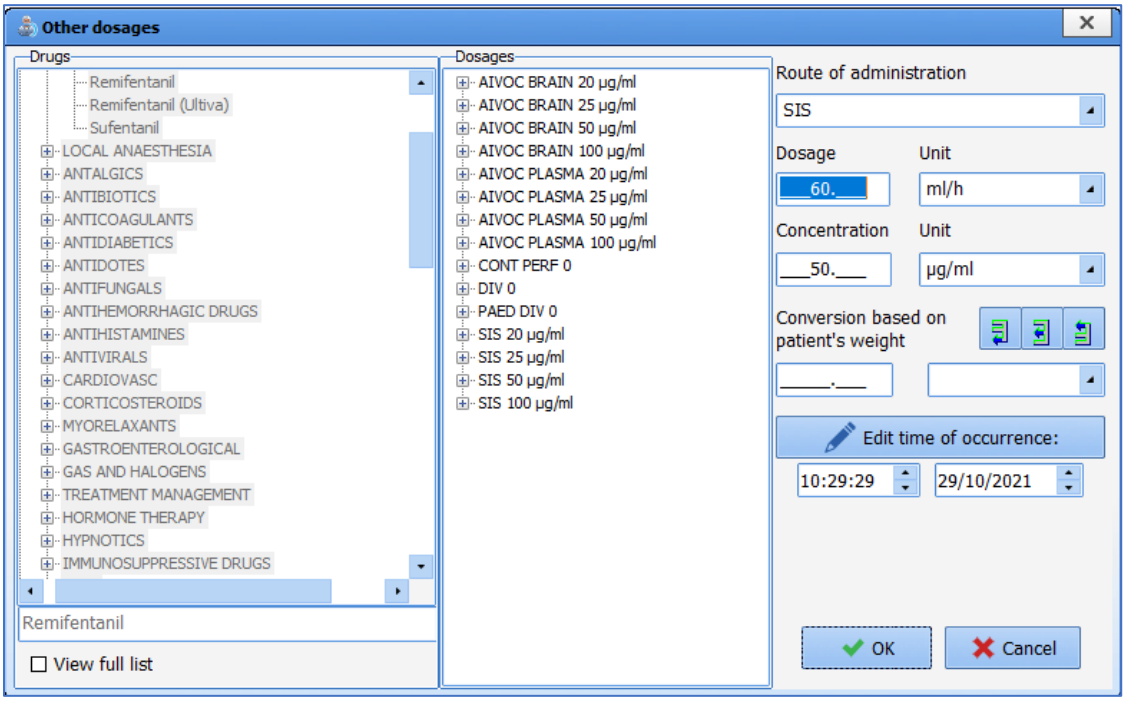
3.4.3.1.4.1 Select a drug or fluid loss

To enter a dose and/or fluid loss, click in the **Drugs/Fluid balance** pane to open a menu. Drugs are classified by therapeutic class. Once the drug is selected, you must choose the route of administration and dosage.



You can also use the specific button . You can type the first letters of the drug to quickly search for it. Drugs starting with those letters are displayed in the bottom window on the left. You must then select it to show on the right its location in the tree above and you can then select the route of administration and dosage.

If the drug, route of administration or dosage is not displayed in the list, click on **Other drugs** or **Other dosage**. The window below appears.



Enter the name of the drug at the bottom left of the window, if necessary. Otherwise, select it from the list. Also enter the **Route of administration**, **Dosage**, **Unit** and **Concentration** of your product.
If you wish to perform a conversion based on your patient's weight, you can use the different buttons provided in the window.

If you click on the button, you can calculate the mass dosage according to the dosage and concentration. To do this, you must enter the dosage, concentration and conversion unit.

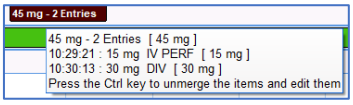
If you click on the button, you can calculate the concentration according to the dosage and mass dosage. To do this, you must enter the dosage, conversion and concentration unit.

If you click on the button, you can calculate the dosage according to the mass dosage and concentration. To do this, you must enter the concentration, conversion and dosage unit.
You can change the time of occurrence before confirming the window by clicking on the **OK** button.
There are three different drug injection and display modes: syringe pump type drugs (continuous injection), ventilator type drugs and flash injections.

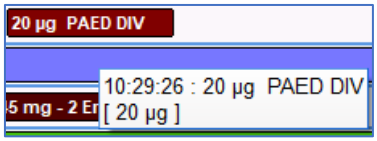
Syringe pump type injections can be entered manually or retrieved automatically: a progress bar is used to represent continuous injections. It is synchronized with the time bar.
When the flow rate changes or is stopped, the colour of the bar representing the former flow rate also changes. The progress of this new flow rate continues in the same form as the previous progress bar. The total injected is shown in the box provided, to the right of the name of the drug.
You can enter a syringe pump drug without specifying a concentration, in which case the volume injected will be calculated automatically.

You can automatically retrieve data from a syringe pump. To do this, turn on the syringe pump. Install the syringe and enter the flow rate directly on the syringe pump. Once you have confirmed your flow rate (the green arrows on the syringe pump are flashing), you will be able to view the progress of your syringe pump on the screen. Depending on the type of equipment you are connected to, you may need to enter the name of the product by clicking on the button below **Entries**.

When two entries are too close together and risk overlapping, the system merges them together as you can see. Simply hover the mouse over to display a tooltip showing you the injection times, routes of administration and dosages.



To separate them, just press the **CTRL** key. Likewise, if a syringe pump and a flash injection overlap, simply hover your mouse over the syringe pump for a tooltip to display the syringe pump start time, concentration and dosage.



3.4.3.1.4.2 Managing repeat injections

When a drug has already been entered during the surgery, you can enter a new dosage by clicking directly on the line of that drug.

- If you click on the name of the drug, the injection time will be the current time.

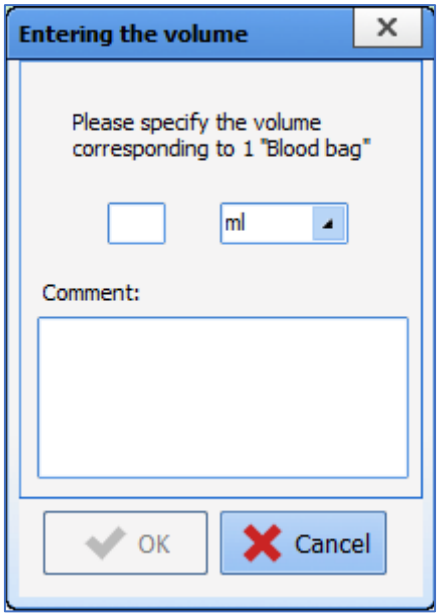
- If you click on the drug line, the injection time will be where you clicked.

When you click on the marker representing the injected drug or on the drug line, you can insert an **Other dosage**, **Resume** or **Stop the SP** or **Delete** it.

NB: You can view a certain amount of information by hovering over the entries with your mouse.

3.4.3.1.4.3 Entering the volume of the blood bags and drip bags

When a drug is delivered from a blood bag or drip bag, a volume entry window will appear if the drug has been configured with the volume entry request.



Enter the information about the blood bag in the **Comment** field or scan the blood bag's barcode.
The unit of volume (in **mL** by default) can be changed.

3.4.3.1.5 Written comments

In the context menu, move the mouse cursor over **Comments**. The **Enter a comment** window opens. Write in the box provided.
The symbol is used for comments on the markers line.

3.4.3.1.6 Ventilation parameters

If your ventilator does not have an RS232, local HL7 or network HL7 link to retrieve parameters automatically, these ventilation parameters can be entered manually.
In the context menu, move the mouse cursor to **Ventilation parameters.** A **Ventilation parameters** window opens. Enter the different ventilation parameter items using the drop-down lists (ventilation, vt(-), RR, I:E ratio, FiO2, PEEP, pressure, pressure support, NO, prone). The date and time of occurrence can be changed. Click on the **OK** button to confirm your entry.
The s symbol is used for ventilation parameters on the markers line.
You can also insert a ventilation parameter using the specific **Ventilation parameters** button.

NB: Ventilation parameters can be configured by your site's key user.

3.4.3.1.7 Manual data

It is possible to enter data manually.

In the data entry bar menu, move the mouse cursor to **Manual Data**. A **Manual data entry** window opens. Choose the parameter or group of parameters that you want to enter manually using the drop-down list. You must then complete the various fields offered to you based on the parameter chosen previously. The date and time of occurrence can be changed.
Click on the **Send** button to confirm your manual entry. The **Send and close** button lets you close the **Manual data entry** window without having to click on the **Close** button.
This entry is displayed in the Current Values pane of the **Parameters** subtab (see the 'Parameters subtab' chapter). Like the other parameters, this parameter can be inserted in the chart pane to monitor changes (see the 'Adding or removing a parameter in the charts pane' chapter).
You can also insert data manually using the specific **Manual data** button.

3.4.3.1.8 Artefacts

You can tell the software that an artefact is present using the specific **Enter an artefact** button.
The symbol is used for artefacts on the markers line.

3.4.4 Intraoperative and postoperative components

Quick presentation of the components usually encountered **during** and **after surgery**.
The anaesthesia record is preconfigured by the site's key user. However, it can be personalized by the user in real time to take into account the specificities of the procedure in progress.

3.4.4.1 Adding or removing a parameter in the charts pane

To view a parameter in a chart, use the mouse to drag and drop this parameter from the **Current Values** pane to the **Charts** pane. Hold down the left mouse click while the cursor looks like this . For the parameter to be taken into account, your mouse cursor must look like this . As soon as you release the left click of your mouse, the parameter, symbolized by its abbreviation and instantaneous value(s), is displayed in the curve pane. Right-clicking on the parameter in the charts pane displays a menu that lets you remove that parameter from the charts area.

3.4.4.2 Parameter display mode

The parameters can be displayed in several ways. The table below shows the different display modes and our instructions to use them:

Display modes	Instructions
None	Does not display the parameter as a chart. Useful in conjunction with the **Tabular** mode.
Curve	Suitable for all parameters.
Tabular	Suitable for all parameters.
Arrow	Only concerns parameters measured discontinuously *(e.g. NIP)*. Only a parameter with 3 physiological inputs will appear in the charts pane in this case.
Area	Applies to curve panes only containing one parameter with two inputs (e.g. gas inhaled and exhaled) or two parameters with one input but not intersecting.
Parameter zoom	From the **Current Values** area (*left column, Parameters tab*), double-click

on one or more parameters to obtain a continuously visible zoom on the screen. This large number can be repositioned by the user. *See example of HR (SpO2).*

This display mode is very useful to closely monitor a particular parameter.

3.4.4.3 Choice of timescale

Right-clicking on the time bar (between the markers line and the charts pane) brings up a context menu allowing you to choose a timescale.
You can display your charts over a 15- or 30-minute period for short surgeries, and over a period of one, two, four or eight hours depending on the length of the surgery you are performing. If you select the automatic scale, the scale will change on its own based on the length of surgery.

NB: Real time simply makes it possible to see the biomedical monitor data in real time in the scale chosen previously. The **Real time** option is not visible in **Read-only** mode.

3.4.4.4 Display colour changes

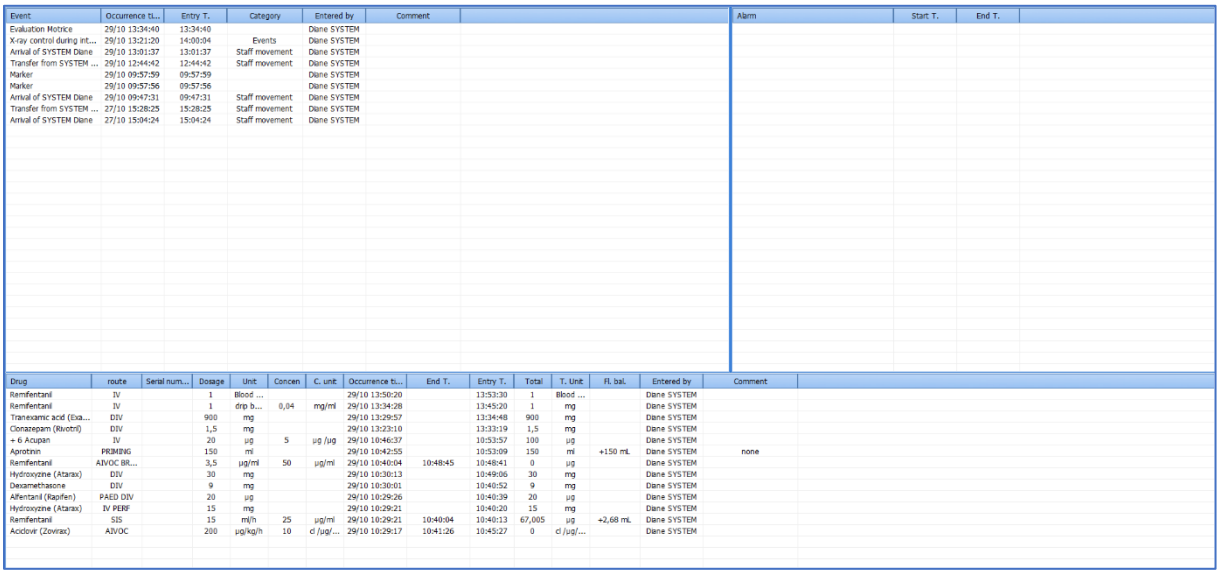
In the curve pane: If you right-click on the instantaneous value of the **Parameter** in the charts pane, the **Configure Parameter display** window is displayed. To change the colour, click on the **Colour** box and choose the colour you want from the palette. This colour palette is used in the same way as in Windows. You can also choose the **Thickness** and **Style** of the line (Continuous, Dotted, etc.).
By default, the **Automatic scale** item is preselected. You can set the parameter **Scale** manually by giving the **Min** and **Max** scale in the relevant boxes. We advise users to set these minimum and maximum scales rather than using the automatic scale. This is because, if there is an artefact in the physiological data retrieved from biomedical equipment, the curves could be illegible (artefacts are always deleted during printing).
It is also possible to change the parameter display mode (chart, tabular, etc.) for the session that is open.
If you right-click in the parameters pane you can change the background colour of the different chart panes. This colour palette is used in the same way as in Windows.

NB: The print colour of the curves is as configured on the computer requesting the printout of your patient's surgery.

3.4.4.4.1 Alarms

You can choose whether or not to activate alarms displayed on the markers line and in the **Alarms!** window by using the specific **Alarms On/Off** button.
A symbol next to the **Entries** pane will indicate that the alarms are displayed on the markers line.

3.4.5 Events tab



You can sort the list of events, drugs and alarms by clicking on the column headings.

3.4.5.1 Events log

We can see a list of all the **Events** (*Events*, *Patient Environments*, *Complications*, *Consumables*, *Comments* and *Ventilation parameters*) entered throughout the surgery, with the **Occurrence** and **Entry** times.
These events appear in descending order of occurrence so that the most recent event inserted is always at the top of the **Events log**.
If you click on one of the entries, a menu lets you delete this event or change its time of occurrence. A **Confirmation** message will ask you to confirm each time you change or delete an entry.

NB: If this information was entered during a previous session, you can no longer change or delete it.

From the **MONITORING** tab, you can change the time of occurrence of an event by clicking and dragging it on the markers line or delete it by right-clicking on the marker. You can also delete or change an event using the specific buttons provided.

3.4.5.2 Alarm log

Here we find the list of alarms transmitted by the biomedical equipment with their **Start** and **End** times. More than 500 alarms can be transmitted by biomedical equipment connected via the RS232 link. These alarms appear in descending order of occurrence so that the most recent alarm triggered is always at the top of the **Alarm log**.

NB: The alarms cannot be changed or deleted.

3.4.5.3 Drug log

Here we find the list of all the drugs (*Drugs, Fluid balance* and *Blood products*) entered throughout the surgery, with their **Route** of administration, the equipment's **Serial number** if it is a product retrieved automatically, their **Dosage**, **Unit**, **Concentration** and **Concentration unit** if it is a syringe pump, and the **injection** time and **end** time (if it is a syringe pump) and **entry** time. These drugs appear in descending order of occurrence so that the most recent drug injected is always at the top of the **Drug log**.
If you click on one of the drugs, a menu lets you delete that drug, change its time of occurrence or stop the flow when the selected drug is injected continuously. A **Confirmation** message will prompt you to confirm the change or deletion.

NB: If this drug was entered during a previous session, you can no longer change or delete it.

From the **MONITORING** tab, you can change the time of occurrence of a drug by dragging and dropping it or delete it by right-clicking on it. You can also delete or change a drug using the specific buttons provided.

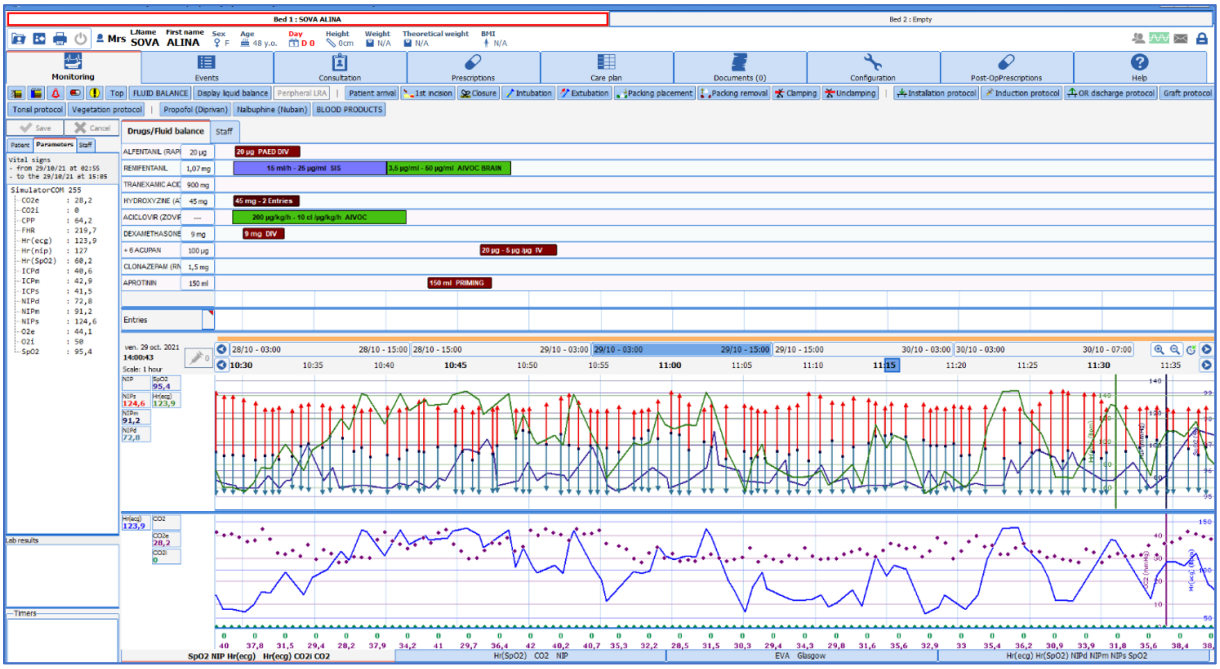
3.4.6 Consultation tab

This tab displays the preop assessment window relating to the current surgery. The information displayed (that you can view or modify depending on your access permissions) adds information to the **Patient** subtab of the **MONITORING** tab.

You can obviously view or add information to the consultation of another patient by selecting it using the Patient selection button. See the 'Preoperative assessment' chapter for more information on how the **Consultation** application works.
To go back to the **MONITORING** tab, select the title bar that you see displayed above the **Consultation** application.

3.5 Specificities of the Postoperative application

The types of tools available in the **Postoperative** application are identical to those in the **Intraoperative** application.



Available beds and occupied beds are displayed at the top of the application as buttons, one of which is outlined in red to show the currently active bed. *In this example, the record belongs to patient Alina Sova in Bed 1. Beds 2 is empty.*
These buttons let you switch quickly and easily from one bed to another in the recovery room. These buttons show the name of the bed and the name of the current patient.

A red vertical line marks the move to the RR.

Before removing a patient record from the application, a person authorized to sign the discharge form must enter their username and password. Your key users can choose whether or not to activate this RR patient discharge form.

NB: you can transfer the patient to another recovery bed. To do this, you must exit the record and choose the **Transfer in Recovery** item in the **Exit** window. Open the correct bed and tend to the patient's arrival.

3.6 Discharging the patient

When a patient is discharged from a room the record must be exited. You can then choose to:

- Transfer the patient
- Close the record

The transfer will be used when the patient goes to an area/unit where they will be monitored using the **DIANE** software.

You should close the record when the patient will no longer be monitored by the software.

If there are important actions that have not been entered, the discharge window can display a reminder and you can enter the information directly from this space. See the '*Important actions*' chapter.

3.6.1 Name and signature of doctor in charge

You can name a doctor in charge of the surgery. If it is an anaesthetist who has logged in to the software, they will automatically be considered as the person in charge of the surgery. You can name the doctor in charge if this person is not logged in, but in this case, they will have to confirm they are in charge by entering their password.
To name the doctor in charge, you can use the button at the top left of the application or the Designate/Confirm person in charge button in the **Staff** subtab of the **MONITORING** tab *(see the 'Staff in the OT/Doctor in charge' chapter)*.
There may be more than one doctor in charge of a surgery.

3.6.2 Signing postoperative medication orders

When postoperative medication orders have been entered in the application's **Medication order** tab, a doctor must sign these medication orders by entering their name and password.
It is possible to sign these medication orders using the button at the top left of the application or using the **Medication order** tab *(see the 'Medication order tab'* chapter*)*.

3.6.3 RR discharge signature

When a patient is discharged from the recovery room, the discharge from the recovery room can be confirmed in the **DIANE** software.
It is possible to sign the discharge from recovery using the button at the top left of the application or using the **Mediation order** tab (see the 'Medication order tab' chapter).

4. DIANE ICU

The ICU module makes it possible for all healthcare providers to collect information and complete the entire patient's record. It is made up of tabs and subtabs corresponding to the different phases of medical and paramedical care.

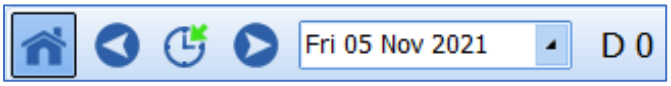
4.1 General appearance of DIANE ICU

The different parts of the software tailor the monitoring to each type of medical condition. Different components offer specific features to facilitate data collection and provide safe care.
Certain subtabs are used to collect administrative, medical and paramedical information. Specific data entry methods help to record developments and generate reports through a number of predefined templates. Also, a specific component lets you quickly enter issue-based nursing notes
The care plan provides information about the different care provided throughout the ICU day. It also displays the various physiological and biological parameters recorded.
A comprehensive medication order tool lets you manage all the medication orders used in intensive care.
Hybrid views let you combine a graphic display of physiological data (vitals, ventilation parameters, etc.) and therefore let you make a detailed visual analysis of the patient's clinical condition.

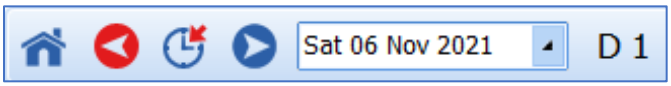
In **DIANE ICU** you browse through the different configured tabs. You can view the information contained in the patient record by clicking on the different tabs. Depending on the configuration chosen, you will not necessarily have access to all the tabs presented below and their names may be different

changing the time

On all of the application's tabs, you can change the time using the ribbon below.



If you click on **one of the blue arrows** you can move back or forward one day and therefore view the patient's data for that day (here, Friday, April 12, 2019).



If you click on the blue arrow button to the right, you will display the information for the next day, which is Saturday April 13, 2019.

Clicking on **the** **button** takes you to the current day. If you right-click on it, the application will take you to the day the patient was admitted.
The drop-down menu lets you choose a specific day using a calendar.
The red items let you return to the present.

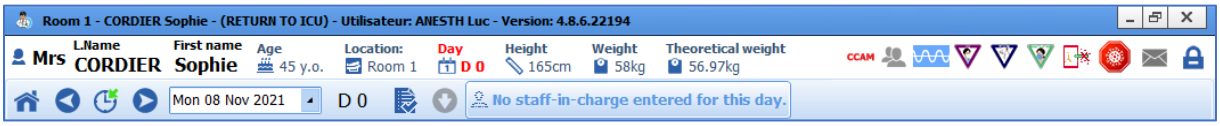
The button lets you return to the list of patients in the unit.

NB: When you change the view on one tab, the other tabs also change.

4.1.1 Top ribbon

The top ribbon is always visible on the screen and permanently displays certain information such as

- Last name, married name, first name, gender, age
- Location, service
- Length of stay
- Height, weight, theoretical weight, body mass index, etc.



On the right side of the ribbon there are different icons.

1 Procedure codes CCAM : when you hover with the mouse you can see the codes registered based on the information entered in the record. When you double-click on them, you can access the entry form for ICD-10 and procedure codes.

2 Patient-oriented email client : by clicking on the icon, you can write a message concerning the patient which will be visible when the mouse hovers over (also present on the portal). The icon turns red when there is a message in the record and shifts back to grey after 24 hours.

3 Data capture : dynamic icon (wave) that shows whether data from biomedical devices is captured.

4 Allergy icon: shows allergies when you hover the mouse over it.

5 Coronavirus icon

6 Contact isolation icon: shows the type when you hover the mouse over it.
7 Airborne isolation icon: shows the type when you hover the mouse over it.
8 Droplet isolation icon: shows the type when you hover the mouse over it.
9 Protective isolation icon: shows the type when you hover the mouse over it.

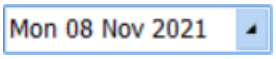
10 Colonization icon: shows the type when you hover the mouse over it.

11 **DIANE MESSAGING** : clicking on the envelope gives you access to the **DIANE** messaging system so that you can write messages

12 Change user : by clicking on the padlock you lock the application. You or another user can log in again by entering your password in the login window located in the taskbar or by clicking on the **Change user button** on the green window that appears.

Estimated data : this icon will appear when a box has been ticked in the information window when a patient record is opened. By double-clicking on this icon you can view this estimated data and/or change it.

Other features of the top ribbon:

Today's date  Box displaying today's date by default. By changing the date, you can move to a specific date. When the box does not display today's date, it turns red.

Length of stay Counter of the patient's length of stay since being admitted with **DIANE**,

Entry of staff in charge Opens a window for you to name the team in charge of the patient (doctor, nurse, nurse aide) for the timeframe of the shift (depending on the ICU day configured: e.g. from 7 a.m. to 7 p.m.)

Take responsibility Directly names the logged-in user (choose from doctor, nurse or nurse aide) as in charge. This function is also directly accessible from the ICU portal. When someone takes responsibility the icon changes and turns green on the portal.

Staff in charge pane

Displays the function, the corresponding timeframe and the last name and first name of the persons entered as in charge of the patient (for the doctor, nurse and nurse aide categories)

Some icons specifically for containment measures may be displayed to the right of the bar:

Here are their meanings:

Airborne
Mask mandatory

Droplets
Wear mask and goggles

Contact
Wear gloves

DI contact

CDI contact

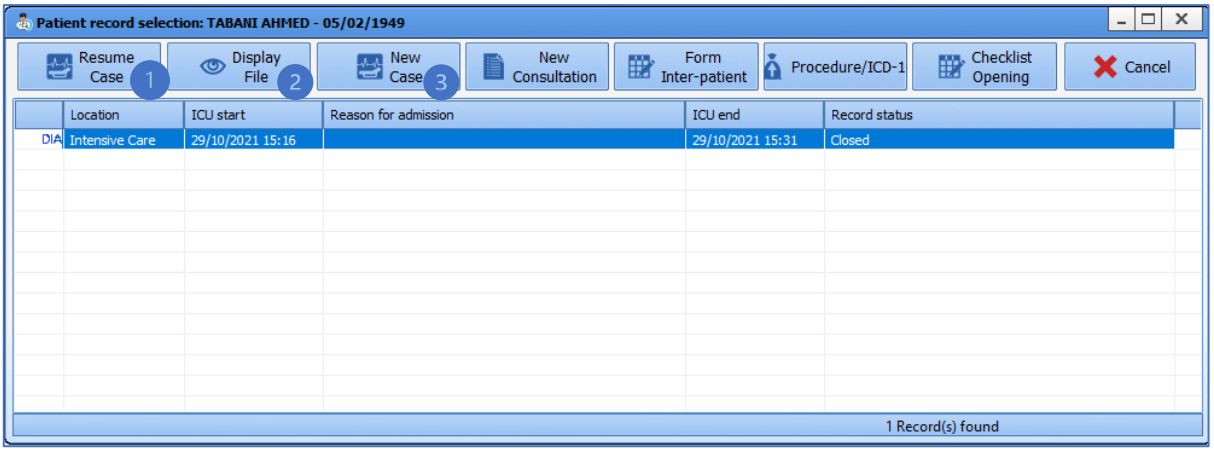
eXDR contact

Protective

4.2 Patient admission and record selection

The patient can only be admitted and therefore the record can only be opened on the primary computer.

Click on the **Patient admission** button.
Select the patient (see the 'Patient selection' chapter). This opens the **Patient record selection** window.



This window has buttons in the header:

1. **Resume case**: this button lets you go back to a record already in use. For example: the patient is released from intensive care to the CCU. To ensure the continuity of the record, it is important to click on **Resume case**.
2. **Display file**: this button is used to view the patient's old record in its entirety.
3. **New case:** this button is used to start a new stay in intensive care. Used to open a new record.

NB: When the patient already has several records in **DIANE**, the window displays at the top of the list the stay foreseen in the unit where you are; the list is then sorted by date then by the record status: completed, not completed, etc.

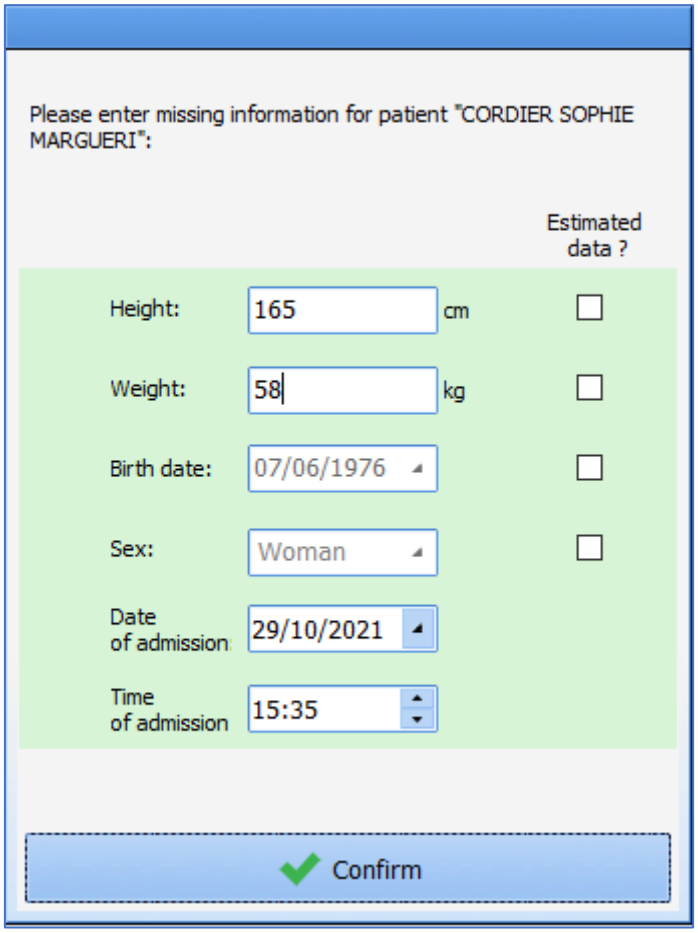
In the example above, the patient has already been in intensive care. The status of his record is **Completed**. No record is dated on the current day or has **Transfer to ICU** status, therefore the patient is not expected.

- If you click on the **New case** button this opens a window asking you to enter the mandatory data to manage the record such as the patient's weight and height…
- Enter the missing data.

Tick the **Estimated data** checkbox when you are not certain about the data. The estimated data can be completed later in the record.

- Click on the **Confirm** button
- Loading and opening the record
- The patient has been admitted. You can start providing care.

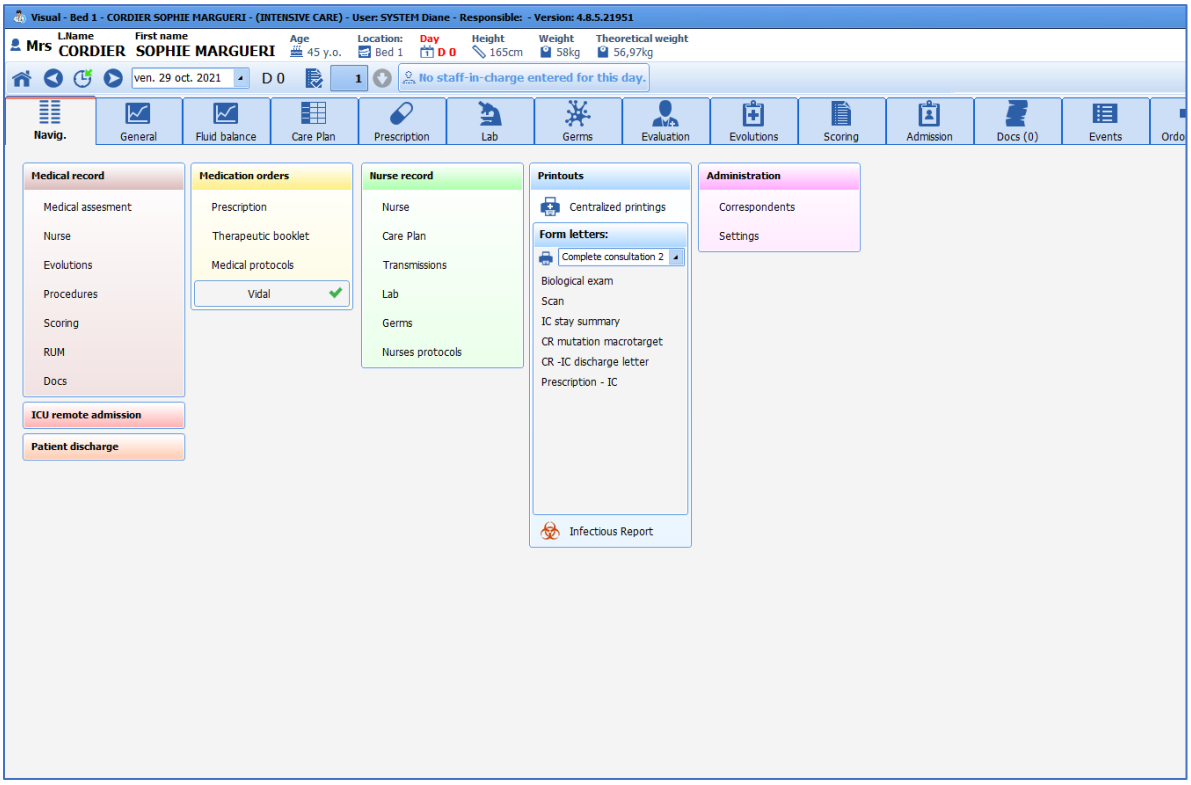
NB: If during their previous stay, the patient had an unresolved infection, the information will be included in this window.



4.3 Main menu tab

The **Main menu** tab gives access to all the application's tabs. These tabs can also be accessed directly by clicking on them.

The buttons on the **Main menu** tab are divided into five main sections: **Medical records**, **Medication orders**, **Nurse record**, **Printouts** and **Administration**.

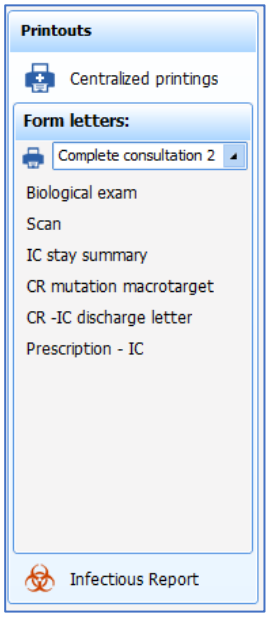


NB: Depending on the configuration in your facility, it is highly likely that the same tabs will not be displayed and you may even arrive on another tab.

NB: The **Main menu** tab is the only tab where you can discharge the patient.
To exit the patient's record, click on the **Patient discharge** button (see the 'Patient discharge' chapter).

Some functions are only accessible from the **Main menu** tab, such as access to medical protocols, centralized printing or patient discharge.

4.3.1 Printouts

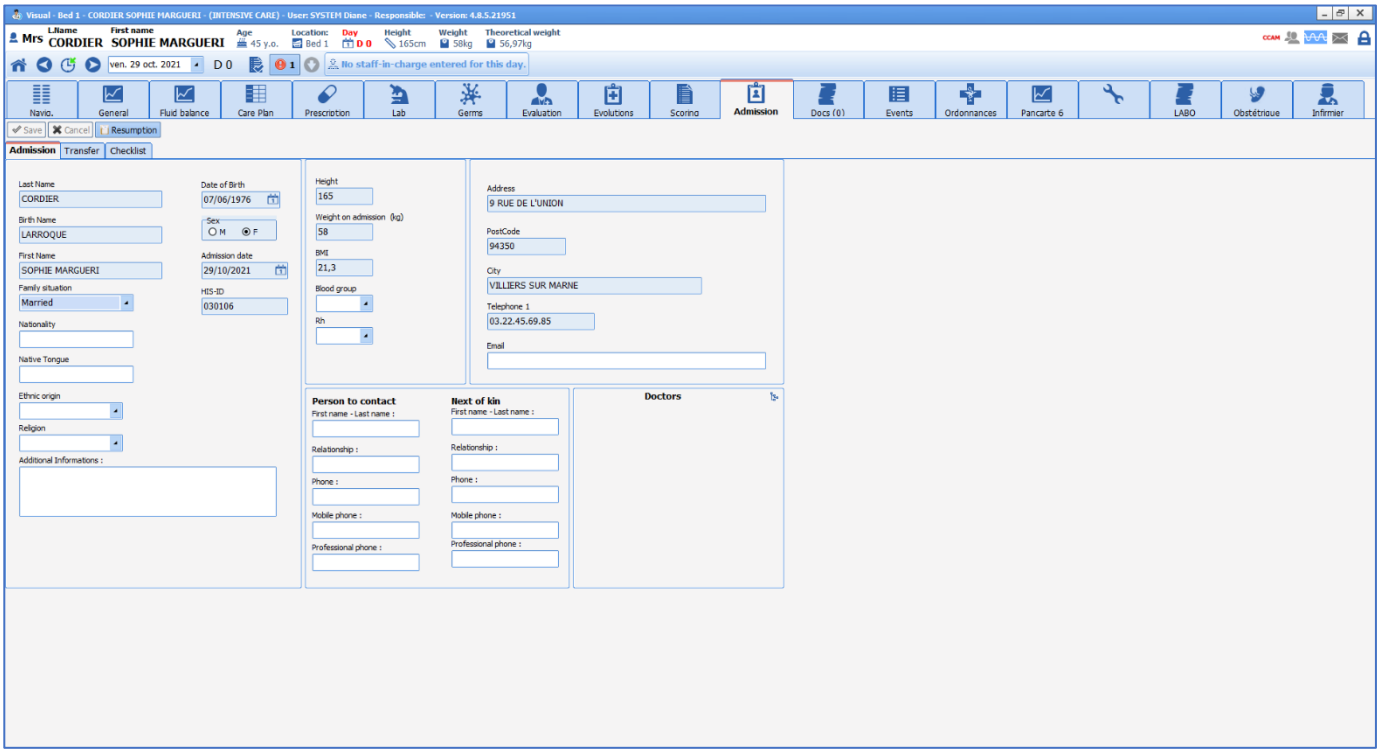


The **Printouts** column gives access to centralized printing (see the '*Centralized printing'* chapter).
It is also possible to directly create and print certain reports or letters by clicking on them.

The infection report makes it possible to generate a document summarizing all the patients who presented with an infection during their stay, such as a pneumopathy, catheter colonization or bacteraemia.

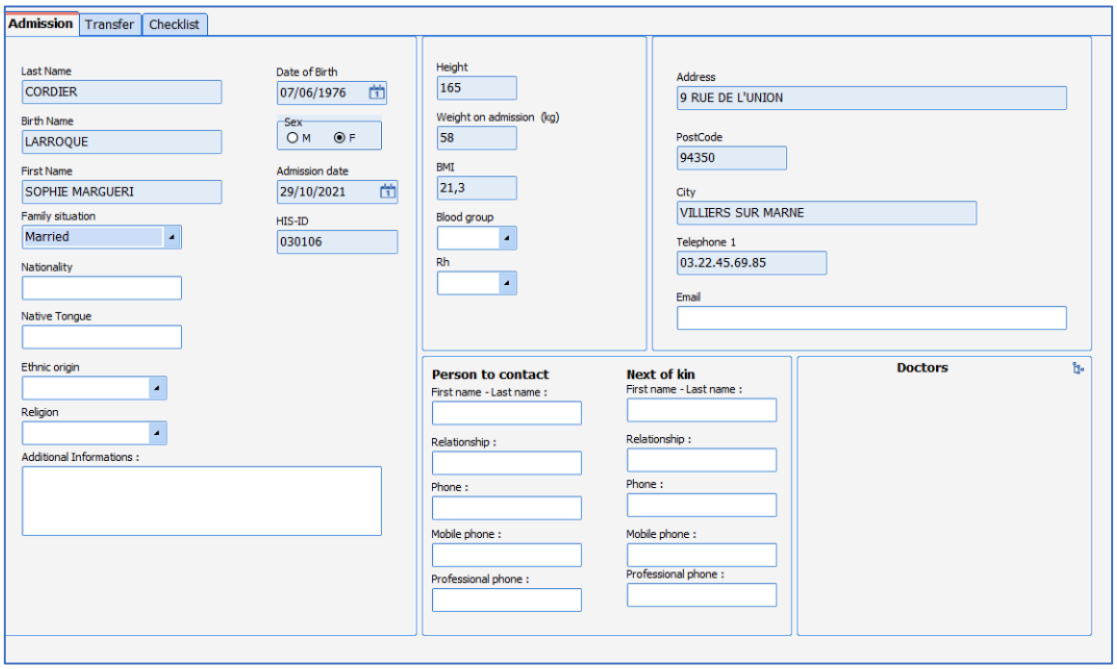
4.4 Admission tab

This tab contains the administrative aspects of the patient record from admission to discharge.



4.4.1 Admission subtab

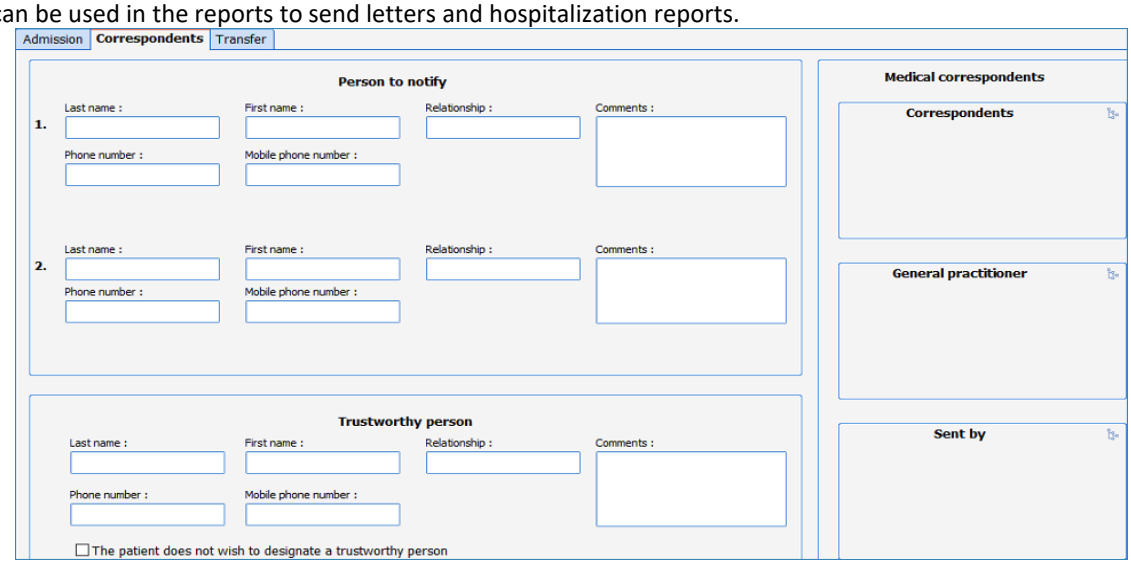
The **Admission** subtab lets you collect the patient's administrative information such as civil status or special preventive measures (guardianship, legal protection, authorization to operate on minors, etc.)



Most of the time, most of this information comes from the electronic health record and therefore does not need to be completed. In this case, this information cannot be modified. If a patient is registered in **DIANE** without creating the patient identity in the electronic health record, the information can be completed directly from this tab. In this case, when the patient identity has been created in the EHR, the software will offer to merge the records.

4.4.2 Correspondents subtab

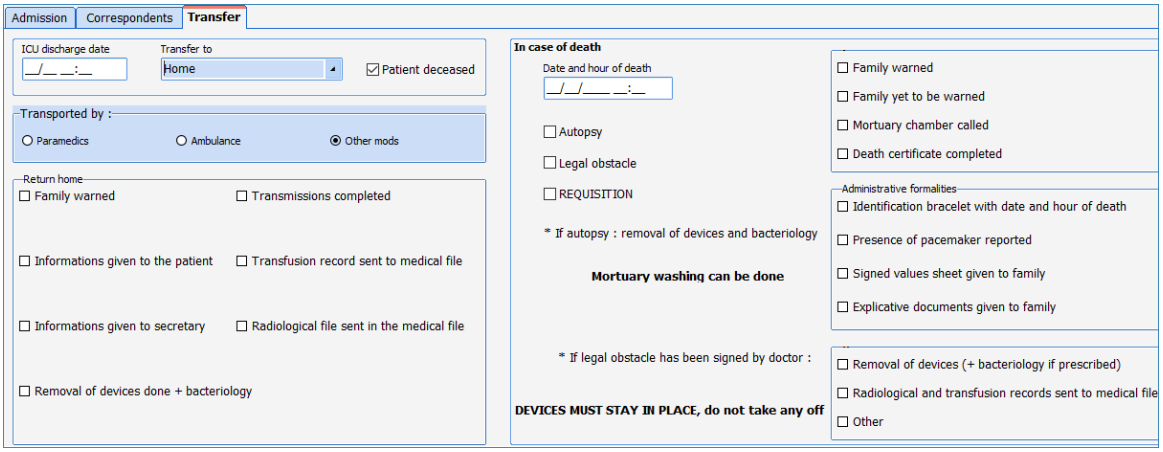
This tab is used to document all known information about the patient's correspondents. This information can be used in the reports to send letters and hospitalization reports.



4.4.3 Discharge subtab

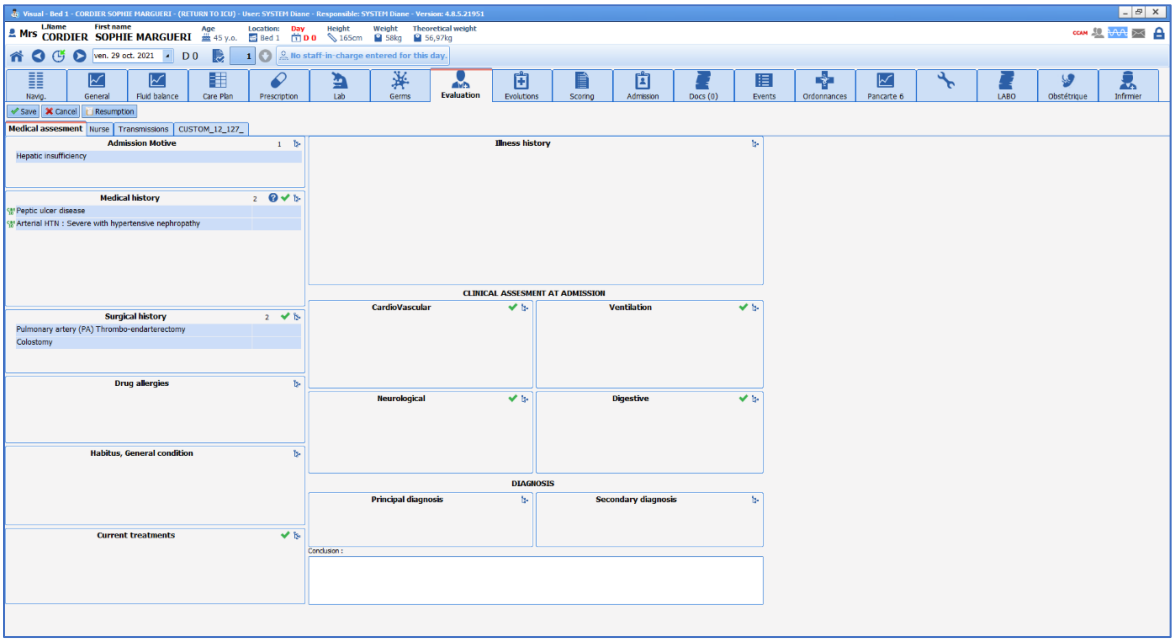
This subtab lets you record how the patient is discharged, for example where they are transferred to, transportation method, etc.
The **ICU discharge date** field cannot be filled in manually. It is completed automatically when the record is closed (or transferred).

REMINDER: the record is discharged via the **Patient discharge** button in the **Main menu** tab. The subtab presented here simply lets you enter certain data when the patient is discharged but not actually discharge the patient.



4.5 Doctor tab

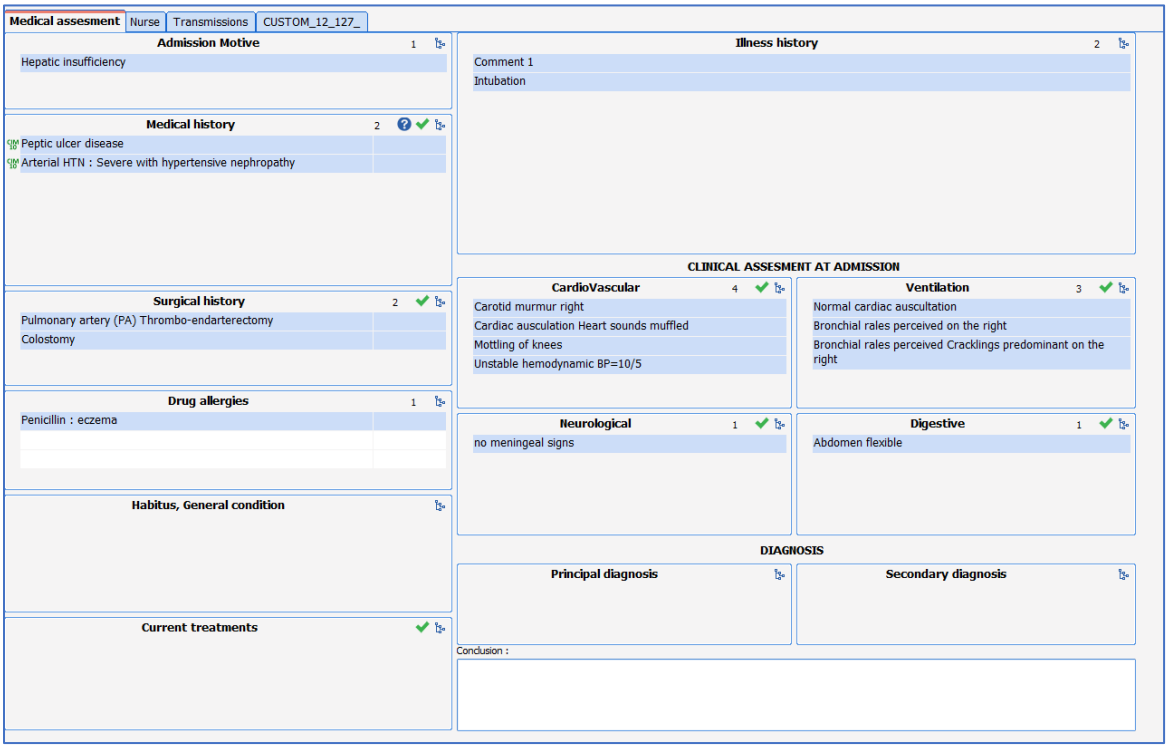
The **Doctor** tab is used to enter data from the patient interview, the clinical examination, hospitalization follow-up information and to prepare reports.
This tab is made up of several subtabs that are described in the next chapters. Some data from these tabs is available in the paramedical tabs. They are often programmed to be read-only so that medical data can only be completed by doctors.



4.5.1 ICU admission observations subtab

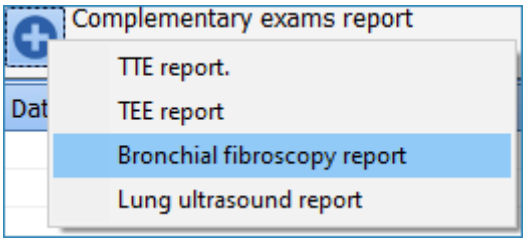
This subtab lets you enter the reason for admission, the patient's medical and surgical history, allergies and also the patient's usual treatments.
This subtab also lets you enter the history of the condition and the admission clinical examination manually. Some of this data (in particular the history) may come from previous records if the patient has already been monitored using the **DIANE** software.
Most often, these fields can be completed using lists of items accessed directly in each field. It is better to use the lists rather than enter the data manually, as this will facilitate matters for queries and clinical studies.

The '*Ways to enter data in DIANE*' chapter explains how to use these fields.

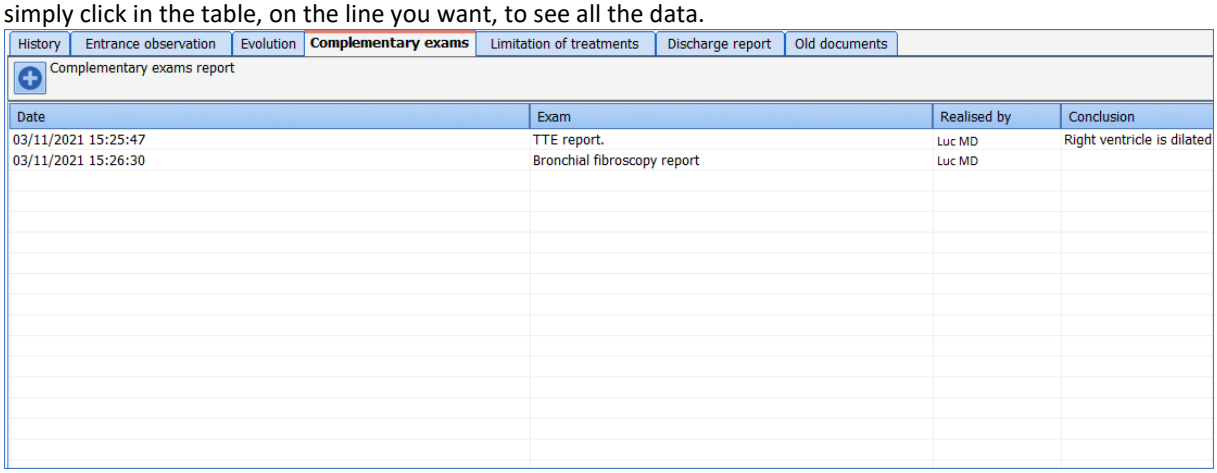


4.5.2 Further examinations subtab

The **Further examinations** subtab is a table for calling up different sheets to enter the results of the different additional examinations carried out in the unit. You can, for example, enter the results of a transthoracic ultrasound or a fibreoptic bronchoscopy.
To call up a data entry sheet, click on the icon at the top left of the table and then choose the relevant further examination using your mouse.



Then all you have to do is enter the data in the corresponding sheet. Once the data has been entered, click on **OK**. The sheet will close.
Some data is visible in the table, which lets you see all the examinations performed on the patient. Then simply click in the table, on the line you want, to see all the data.



4.5.3 Changes, ICU summary and Discharge report

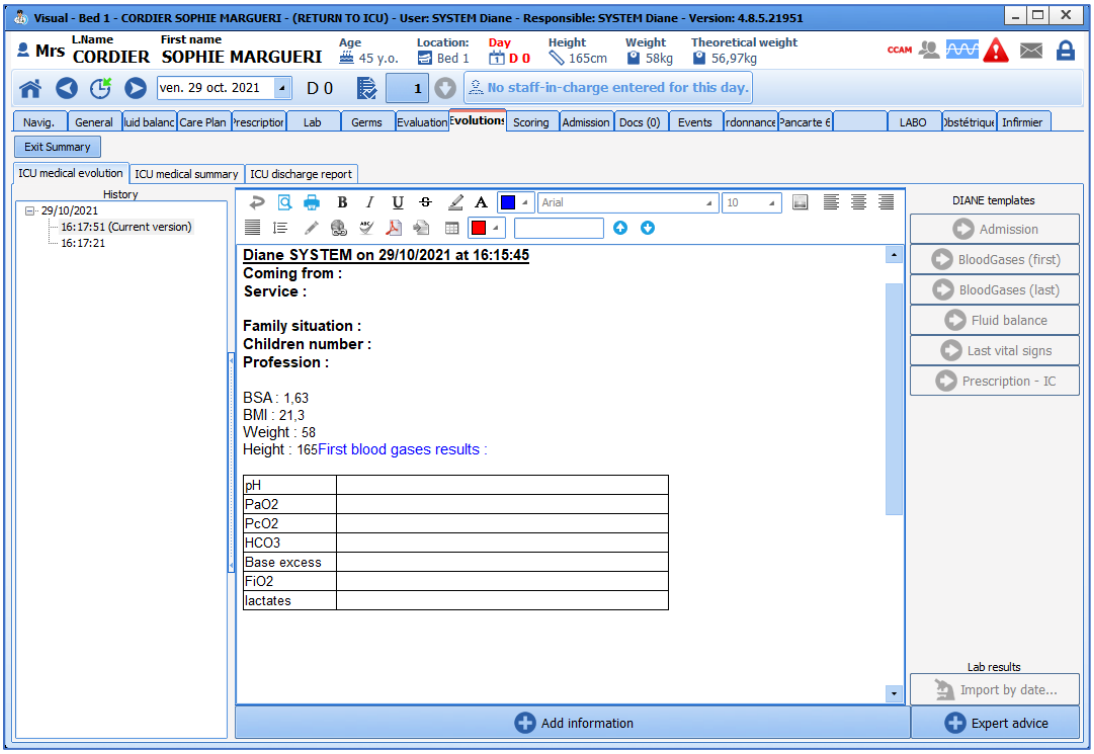
The **Changes**, **ICU summary** and **Discharge report** subtabs are used to generate documents (see the 'Document creation area' chapter). These components let you enter information manually while importing preconfigured templates. This method lets you incorporate data from the record such as vitals, history and lab results.

4.5.3.1 Example of the Changes subtab:

This subtab lets you record changes to the patient's medical data on a daily basis.
Depending on the settings:

1. Click on the **Add information** button at the bottom of the component then click inside the field. The user's first and last name and the date and time of data entry are automatically displayed.
2. A template can be displayed immediately when you click inside the component. Then simply enter the data.
3. On the right of the component, there are buttons to call up templates containing data taken directly from the record. Click where you want to be in the data entry field then click on the relevant button (e.g. **Fluid balance**). The data will be entered automatically where you need in the field.

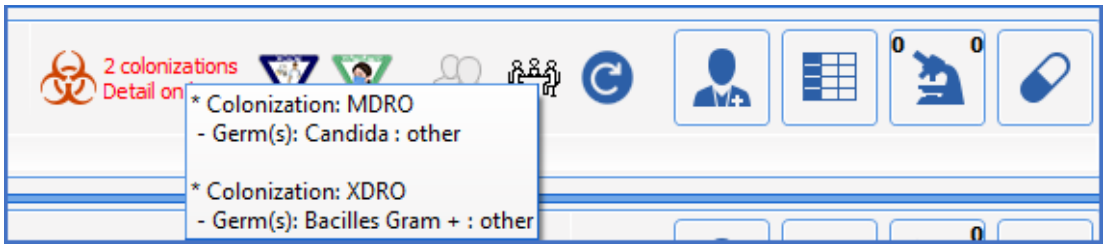
It is therefore possible to compile a daily report of the patient's clinical progress.



* **Integrated text editor**: for long and formatted text entries (bold, italics, colours, preconfigured templates, etc.)

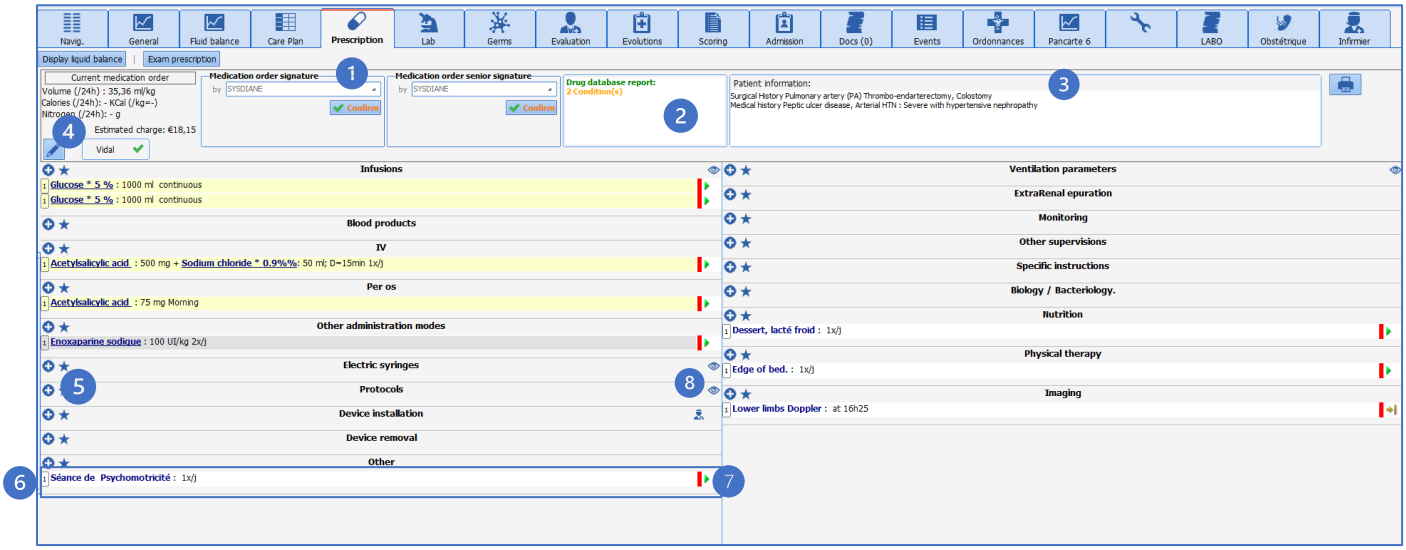
The **ICU summary** subtab works in the same way and lets you compile a summary of the patient's daily changes.

The **Discharge report** subtab works in the same way and lets you compile the patient's discharge report. The report can be printed from the **Main menu** tab and/or directly exported to the electronic health record.



4.6 Medication order tab

The **Medication order** tab allows users with application permissions to prescribe any necessary procedures or treatments for the patient. Signing medication orders lets you generate the care plan.



The **Medication order** tab is made up of different boxes called Medication order fields (e.g. IV, oral, etc.) to easily see current medication orders.

1: Medication order signature: this box lets you confirm the medication order .

2: Medication order analysis: this box is used to create automatic warnings about potential drug incompatibilities, overdoses or allergies.

3: Patient information: this area is for feedback about the patient such as history or allergies.

4: Calorie and nitrogen calculation: this area lets you see the estimated number of calories over 24 hours and the quantity of nitrogen in the current medication order.

5: this area to the left of each medication order field is used to prescribe the relevant drugs, care or monitoring. The '**+**' sign opens the medication order window and the star sign gives direct access to medication order favourites

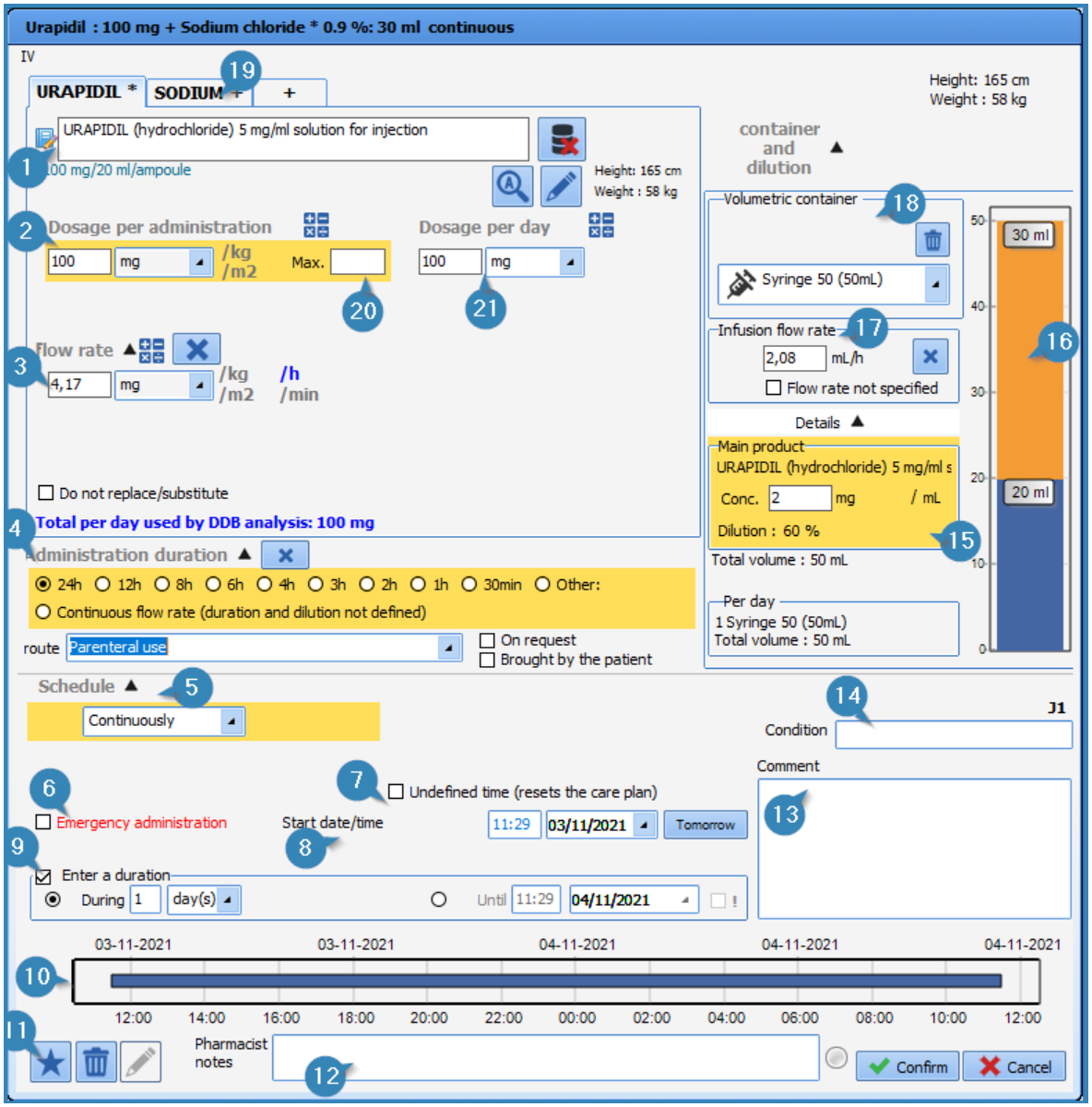
6 : Medication order field: an area that groups together several medication order of the same type. For example, the Antibiotics medication order field is used to prescribe all antibiotics.

7: Medication order status: this area to the right of each medication order field is used to show its status using a system of icons.

8: Contextual information indicator - eye: this provides information about the patient when you hover the mouse over it. For example, you can directly see the vitals or the latest lab results to help prepare the medication order.

4.6.1 Medication order window

Clicking on the '**+**' sign to the right of a medication order field opens the medication order window.



1 Product selection: this box lets you choose the product and its pharmaceutical form (e.g. Urapidil : 20 mL ampoule containing 100 mg). When you start typing the letters in the input field, the list of corresponding drugs (from the facility's formulary and/or the drug database) appears. Simply choose the product and pharmaceutical form you want.).

2 Dosage per administration: this box lets you choose the quantity of drug per dose. It is possible to change the unit (mg, drops, etc.) via the drop-down menu. You can adjust the dosage according to weight, body surface area or duration by clicking on **kg**, **m²**, **h** or **min**, to the right of the input fields.

NB: changing this box automatically changes the flow rate and dosage per day boxes

3 Flow rate: this box is used to change the flow rate of the drug in units (mg, g, drops, etc.). In the case of an infusion using a syringe pump, the flow rate in mL/h (for example) is entered in the **Infusion flow rate** box (17).

4 Duration of administration: this box is used to enter the duration of treatment. If you choose 'continuous flow', it means that there are no interruptions between the different administrations.

5 Schedule: this box lets you enter the frequency of administration of a treatment (e.g. every 8 hours, single

injection, etc.).

NB: to avoid inconsistencies in medication orders, when 'continuous flow' is selected in the duration of administration box, the schedule box will automatically display 'continuous'.

6 Emergency administration: this checkbox is used to show in the care plan, using the icon, that the treatment is administered in an emergency. The medication order summary font colour will be red.

7 Undefined time: this checkbox means you do not have to schedule a treatment start time. In the care plan, the nurse will be able to schedule the time of the first dose of treatment, which will automatically shift the following doses, maintaining the interval between each one. (For example: if Lovenox 4000 IU/24h is prescribed in the afternoon but injections are usually given in the unit at 7 p.m., the nurse can change the injection time and all the injections will be scheduled for every evening at 7 p.m.). This will also make it possible to schedule injections 6 hours after a patient comes out of the OT for example

8 Start date/time: this box is used to schedule the date and time the treatment starts.

9 Specify duration: this box is used to specify the duration of the treatment (e.g. Clamoxyl 3 g/day **for 5 days**). You can also schedule the day the medication order should stop.

10 Chart display: this area shows the frequency of administration of the prescribed treatment in chart form. A solid blue bar means continuous administration (such as an infusion) and a treatment administered 3 times a day will be shown as 3 blue lines, each one every 8 hours.

11 Delete and favourites box: the 'bin' icon lets you delete the medication order being written and start from scratch.
The star icon lets you create a favourite. For a medication order to become a private favourite (i.e. only visible to the user who created it), just click on this icon then click on **Private favourites**). Users with the necessary permissions can create a 'public favourite' that will be available to all prescribers.

12 Pharmacist's comments: medication orders created in **DIANE** are checked by the pharmacist who can make comments that are visible in this section. Their level of importance can be shown using a coloured ball. The comment will be visible in the medication order summary area

13 Notes: lets you enter notes about the medication order that will be visible in the care plan.

14 Condition: lets you specify a condition for the medication order (e.g. if systolic blood pressure > 16 mmHg).

15 Details: this area lets you see certain details about the content of a syringe or infusion bag (concentration of the drug after dilution, volume infused, etc …)

16 Dilution chart: this area shows the volume of each ingredient in the syringe as a chart.

17 Infusion rate: this area lets you enter the flow rate of a dilution in mL/h. Changes to this field modify the dosage per day (21), dosage per administration (2) and flow rate in mg/h (3) fields

18 Volumetric container: this box lets you choose the type of container for IV administration (syringe or infusion bag) and its volume.

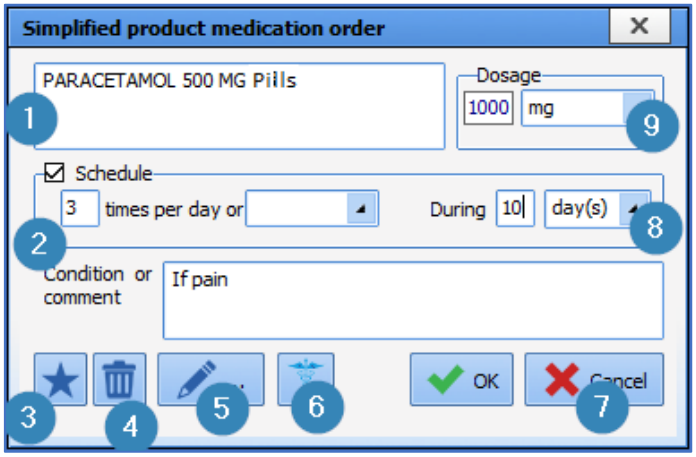
19 Diluent tab: this tab lets you combine several products in the same infusion. You must open one tab for each product. This can be used, for example, to combine ions in a base.

20 MAX: this field is used to limit the medication order to a maximum dose.

21 Dosage per day: this field is used to enter the daily dosage. This is calculated automatically when you enter the dosage and frequency of administration of a treatment or enter the dosage and rate of an infusion

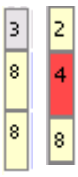
4.6.2 Simplified medication order pane

You can use a simplified medication order window for oral treatment medication orders.
The *Ordering oral treatment* chapter describes how this works.



1 Product selection
2 Schedule
3 'Favourite' button
4 Bin icon
5 Pencil icon
6 Caduceus icon
7 Confirm/cancel medication order
8 Duration of treatment
9 Dosage

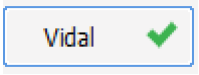
4.6.3 Medication order field icons



This box preceding the text in the medication order line shows how many days this medication order line has been active.
It can also be orange to show that there is an interaction on this medication order line (hovering your mouse over it will show the details of the interaction).
It is blue-grey when this entry contains unsecurable units because the dosage of at least one product has been changed or could not be retrieved from the drug database due to incompatible dosages.

4.6.3.1 Drug database report:

The **DIANE** application is connected to a drug database to try to prevent interactions, overdoses and allergies.

The green icon 

next to Vidal or BCB shows that they are successfully connected. If this icon turns red, contact your IT team to reconnect.

A summary of the drug database report is displayed in the top ribbon of the **Medication order** tab. This tab is colour-coded as follows:
Red: Allergy warning.
Orange: Dosage, interaction, contraindication and medical condition warning.
Black: redundancies and precautions for use.

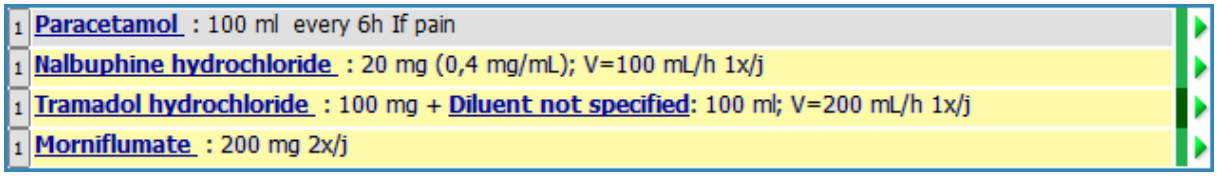
A colour code is also used in the medication order line to easily find the product(s) that triggered the warning. The background colour of the medication order line depends on the drug analysis report:
- **Orange** interaction indicator: product interacts with another, interaction not recommended.
- **Red** interaction indicator: product interacts with another, interaction contraindicated.

- **Mauve**: product redundant with another.
- **Yellow**: product confirmed.
- **Grey**: product not found in the drug database.
- **White**: line not included in the drug database report.

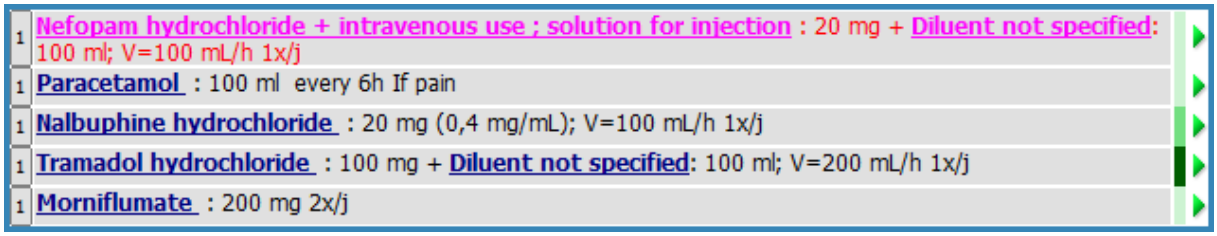
4.6.3.2 Colour coding of medication orders:

The normal colour for a medication order is **Dark blue** for the main product and black for additional information. Clicking on the summary line opens the medication order creation window to view or change it.

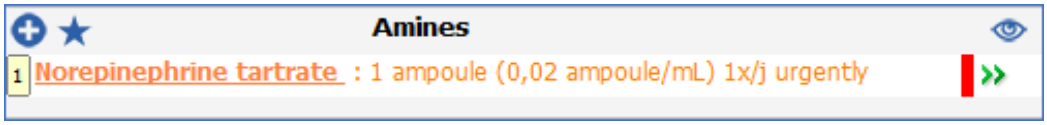
When the medication order is signed the red bar turns green.



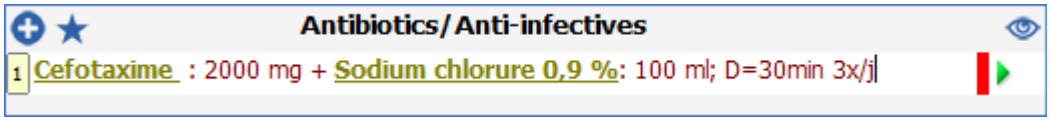
The dark green bar means a medication order has just been changed.
The light green bar means a current medication order.



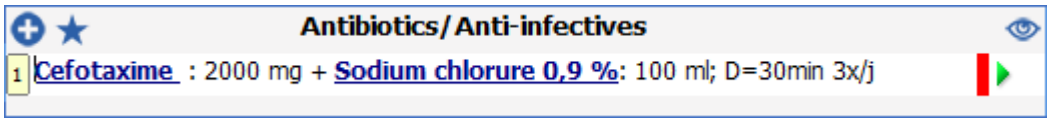
The pink line means a medication order requested by the doctor and administered by the nurse. This must be confirmed by the doctor. The dosage is shown in red here.



The orange line indicates an emergency medication order.



The line indicates an antibiotic medication order to be completed. Once completed, the line turns blue.



4.6.3.3 Meaning of the icons to the right of the medication order lines:

: Current medication order.

: Current medication order without a scheduled end date.

: End scheduled (finished soon) – Scheduled to end that day. The medication order will be considered finished when the date and time have elapsed and will not be retained the following day.

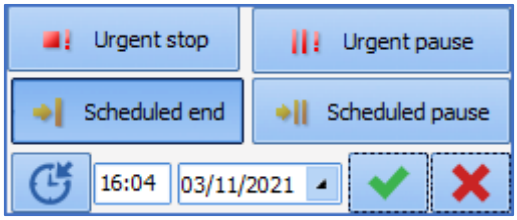
: Pause scheduled (pause soon) – Paused scheduled that day. The medication order will be considered paused when the end date and time have elapsed and will be retained over the coming days if its status does not change.

: Medication order finished

: Medication order paused

: Urgent stop – Unlike a typical stop, an urgent stop means that all occurrences with a **'To do'** status (including occurrences prior to the current time) will be removed from the care plan when the doctor signs)

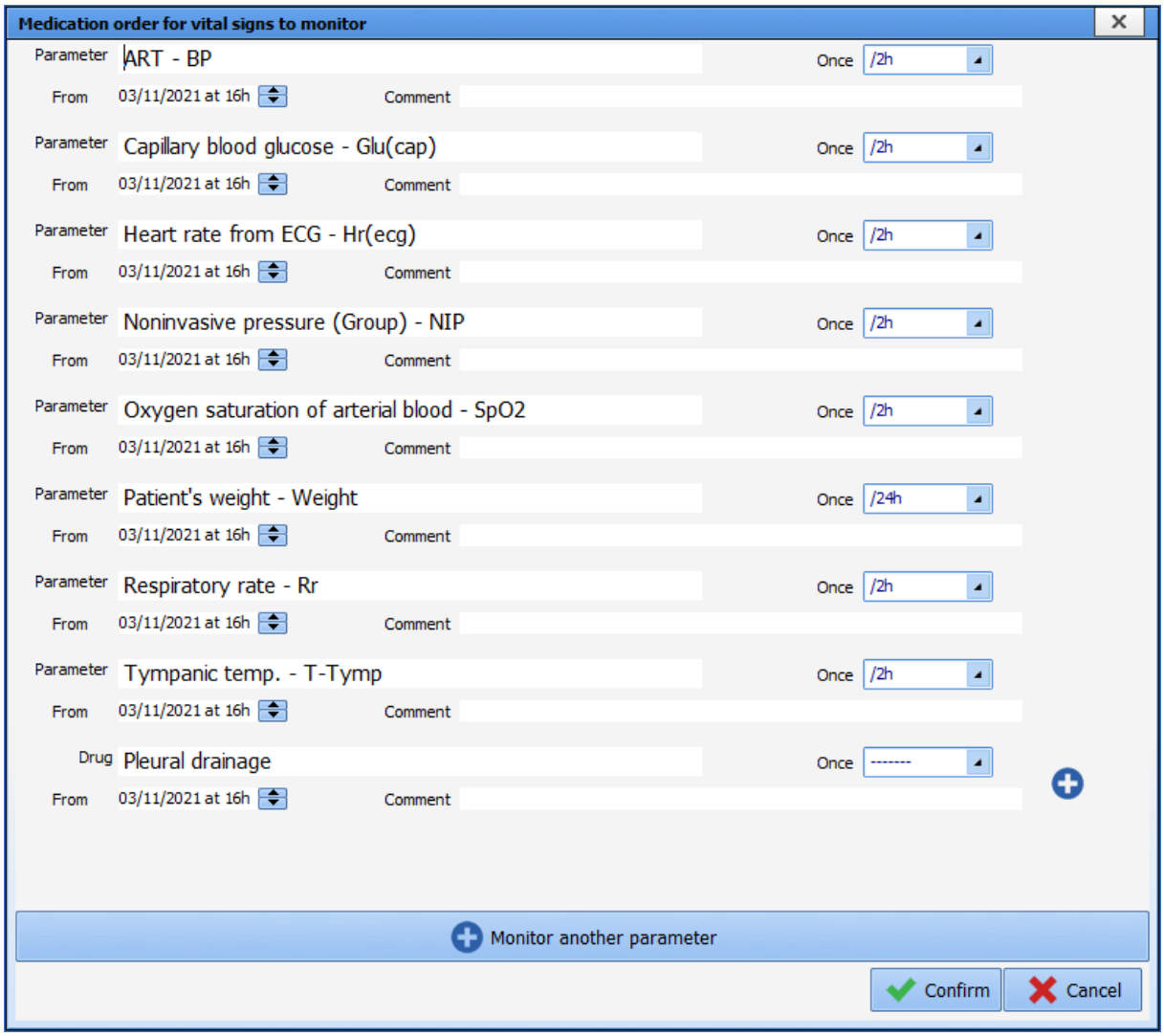
: Urgent pause – Unlike a typical pause, an urgent pause means that all occurrences with a **'To do'** status (including occurrences prior to the current time) will be removed from the care plan when the doctor signs)



By clicking on this icon, you can stop, pause or resume a medication order.

4.7 Medication order examples

4.7.1 Ordering clinical monitoring



To prescribe the monitoring of physiological parameters, you can add as much physiological data as you wish and choose from the monitoring frequency choices in the drop-down menu.

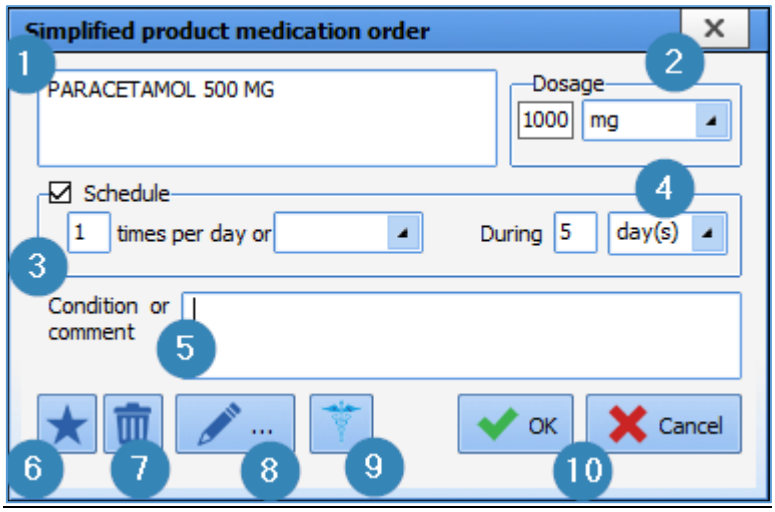
NB: once prescribed, you cannot (for now) remove a parameter from the list to reduce the amount of information in the window. Choose the 'zero' frequency to prevent the parameter from being displayed in the medication order.

4.7.2 Ordering drugs

4.7.2.1 Ordering oral treatments

Example: medication order for Paracetamol 1 g × 3/day for 3 days.

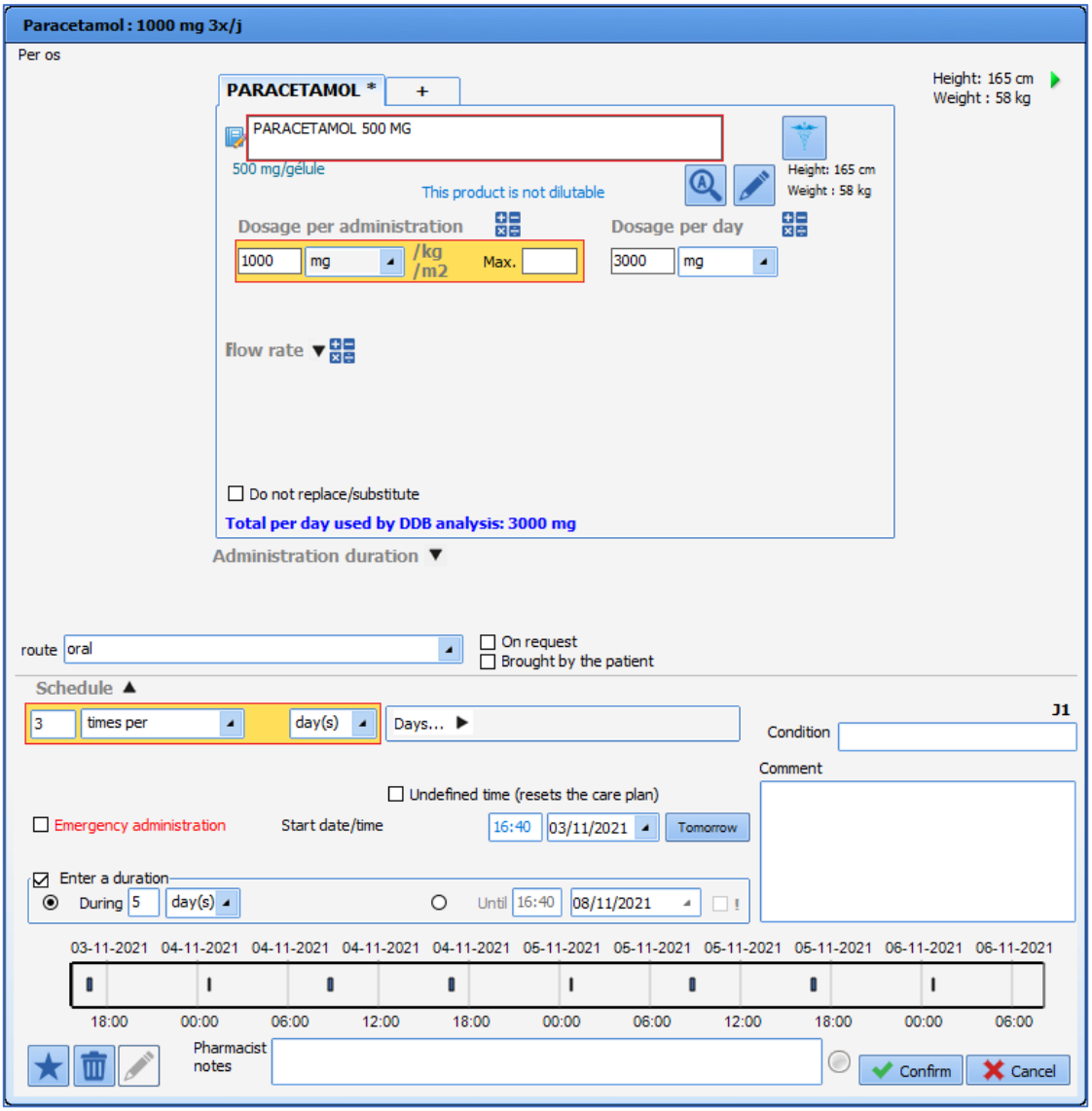
The application lets you use a simplified medication order window to quickly enter a simple medication order.



(1) Drug search: enter the first letters of the product. Choose from the list.
(2) Dosage: enter the chosen dosage.
(3) and **(4)** Schedule: lets you enter the frequency of administration and duration of treatment. Here, once a day for 5 days.
(5) Condition or note: lets you enter a note.
(6) Clicking on this star will save the medication order as a favourite. This favourite will be proposed to you in the field in which it was created. Here, the **Per Os** field.
(7) Bin icon: lets you delete the selected medication order.
(8) Pencil icon: opens the usual, non-simplified medication order window.
The information entered from the simplified window is outlined in red here.
(9) Caduceus icon: used to display the product monograph.
(10) **OK** or **Cancel** button: lets you confirm or cancel the medication order being written.

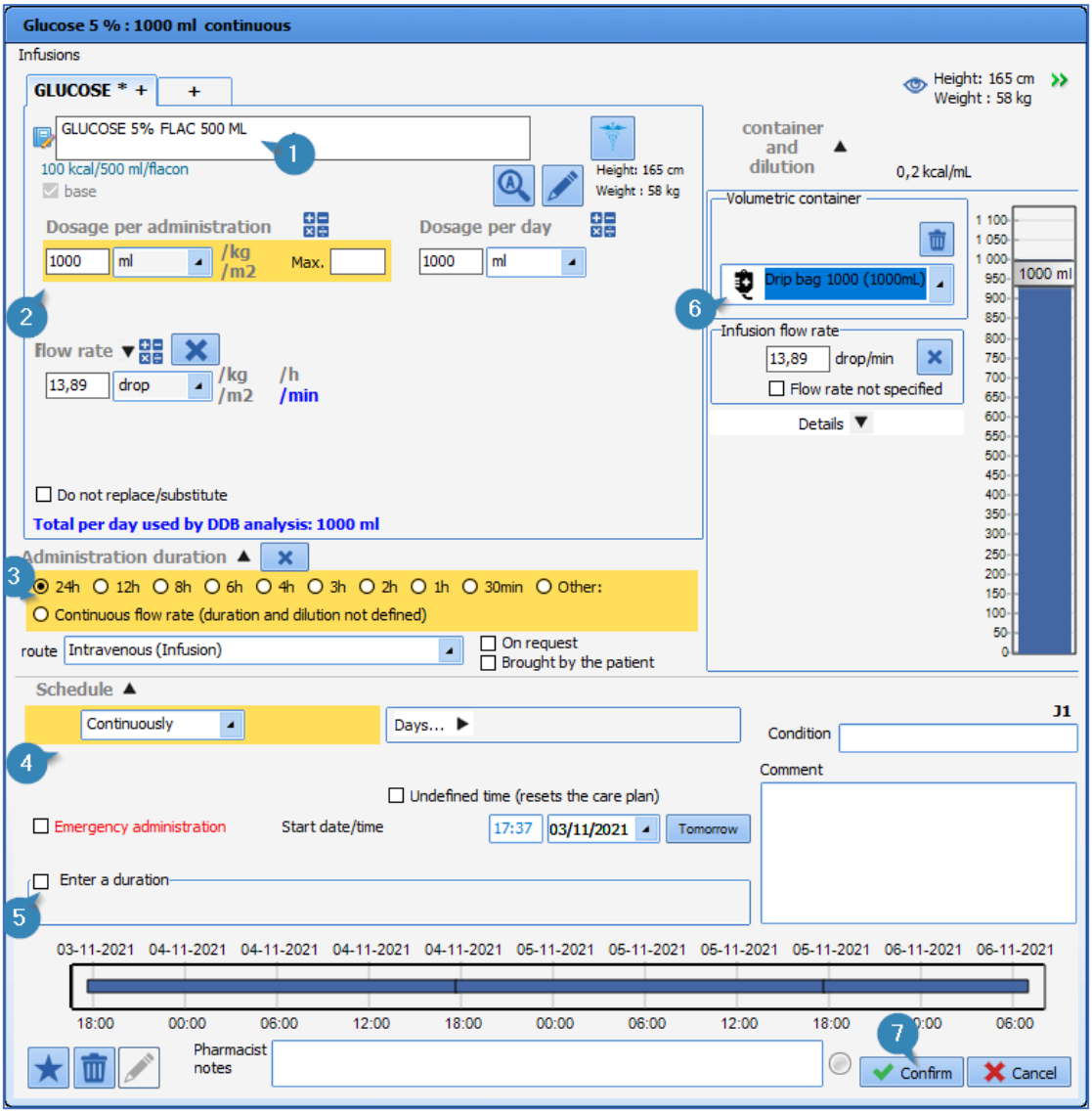
NB: the pharmaceutical form is automatically proposed according to the drug chosen in the product selection box. For example, if you choose paracetamol tablets, the 'tablet' form will be offered in this area.

Clicking on the **Pencil** button **(8)** opens the medication order window detailed below.z



4.7.2.2 Ordering an infusion

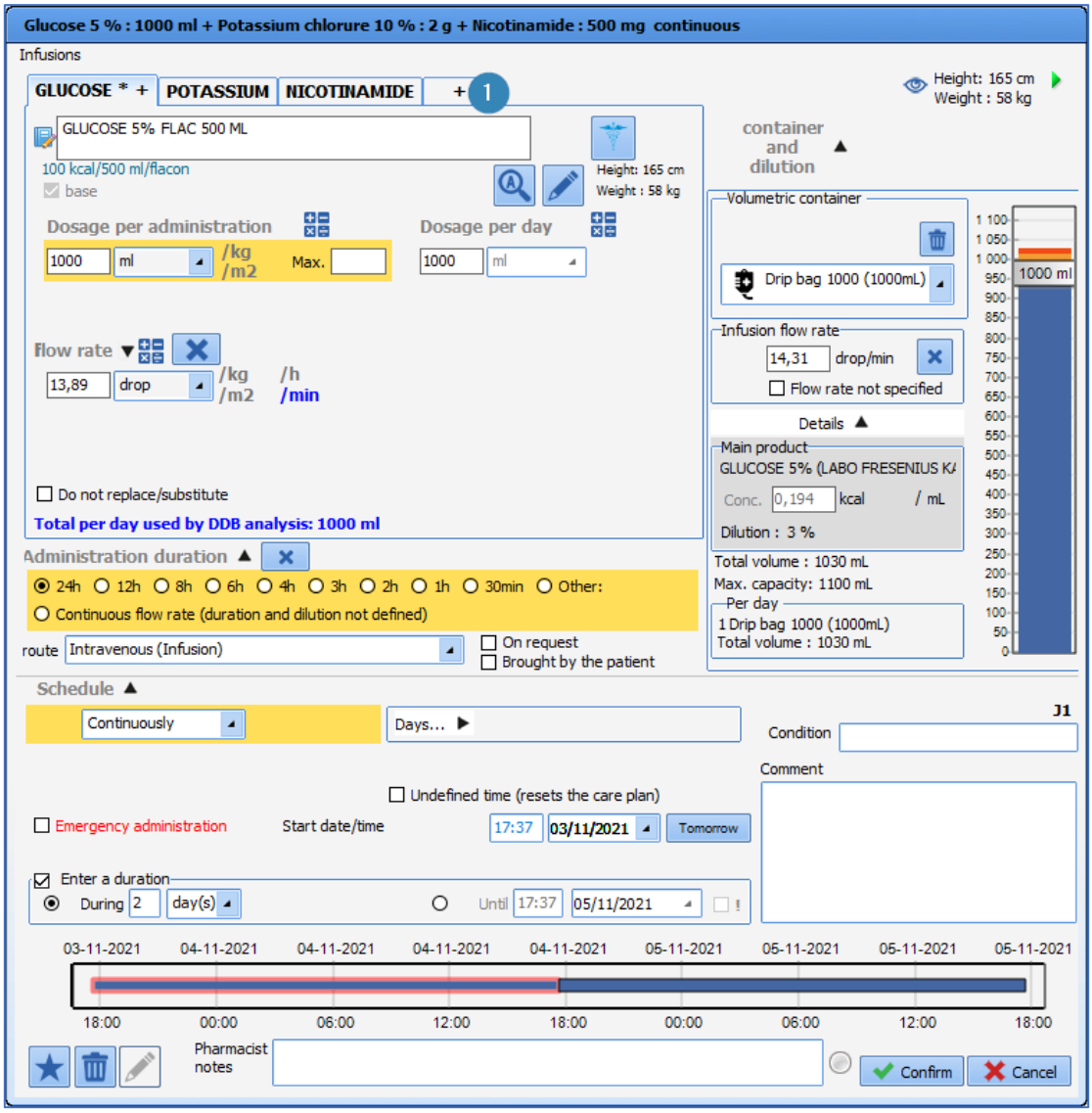
Example: *medication order for continuous infusion of 1000 mL glucose 5% without a scheduled end date*.



Type the name of the product in the product selection box. A list of proposals is displayed. (1)

- Select the product matching your choice. The dosage, unit and route of administration are automatically entered.
- Adjust the dosage as necessary (2). In the example, we have voluntarily chosen *500 mL glucose 5%* to change the dosage.
- Enter the duration of administration (3).
- Uncheck the default 1-day schedule (5).
- Choose the volumetric container (6); a message tells you that the product will automatically be considered as a base.
- Click on confirm (7). Your medication order is now ready to be signed.

Example 2: *Glucose 5% infusion 1000 mL/24h, to which we will add ions and vitamins, administered over 2 days*.

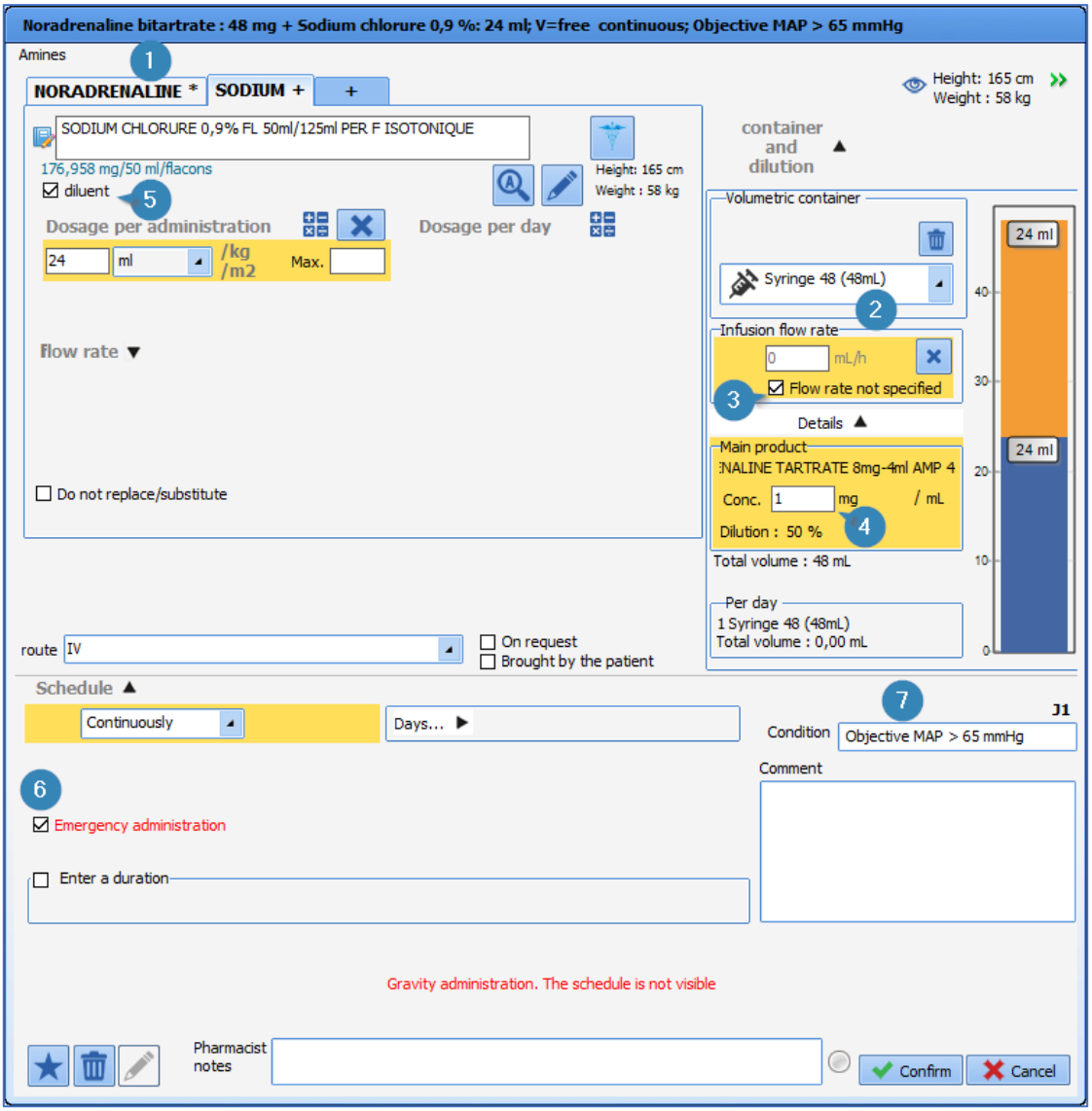


- Click on the plus sign (1) next to Glucose*, this opens a new product selection window. Add the product you want (here we have used Potassium), and the desired dosage.
- Repeat as needed.

NB: The summary in the blue ribbon at the top of the medication order lets you check that the medication order is correct.

4.7.2.3 Ordering a syringe pump

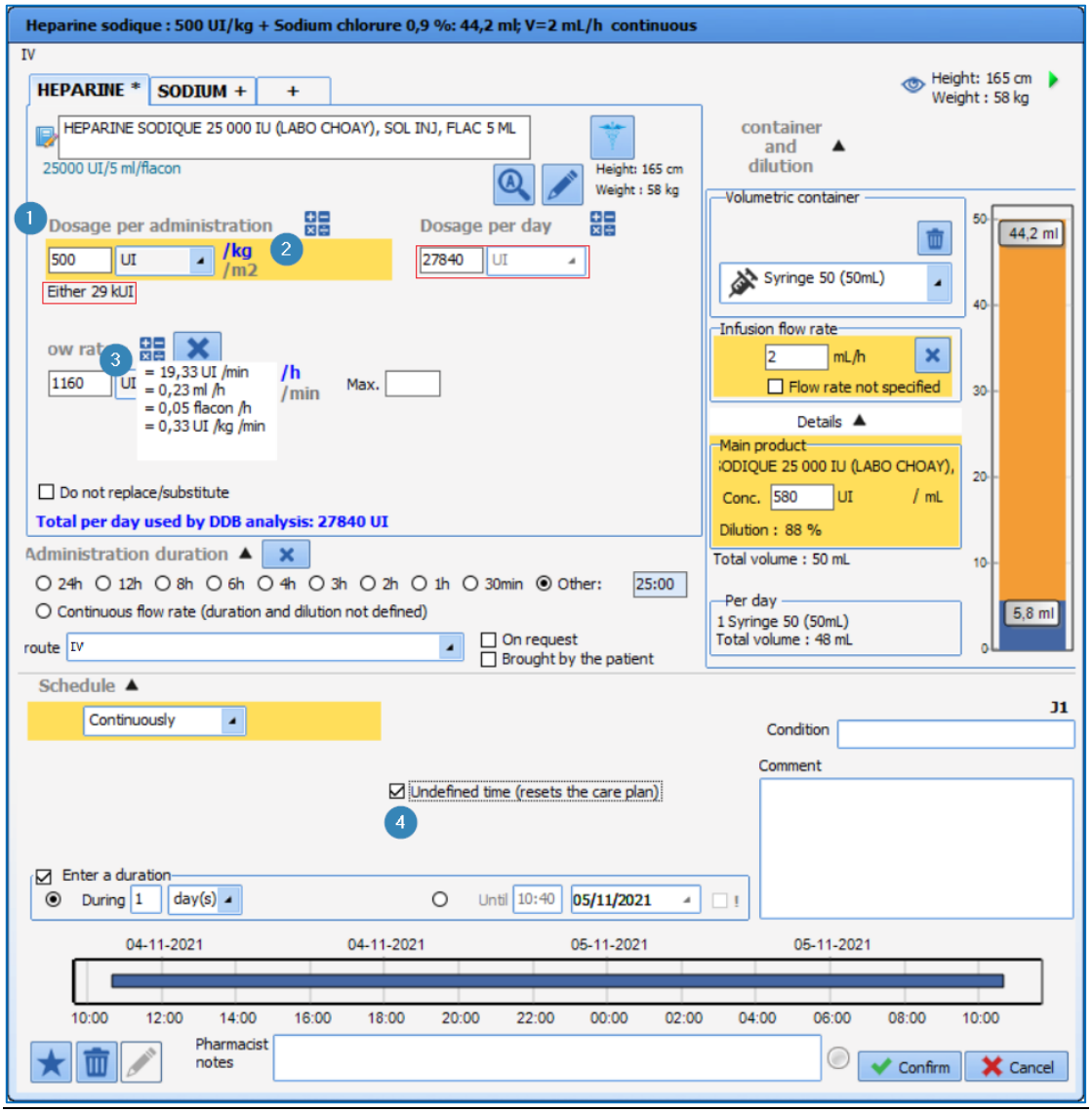
Example: *medication order for a syringe pump of Noradrenaline 1 mg/mL with flow rate as desired with target MAP > 65 mmHg for emergency administration*.



- Choose the relevant product by typing its name in the product search box (1).
- Select the **Volumetric container** (2). A 48 cc syringe, here.
- When selecting the volumetric container, check the **Flow rate not specified** box (3). The nurse will be able to start administration at the dose they deem appropriate.
- Enter the desired **Concentration** in (4). The quantity of the main product and the quantity of solvent will be calculated automatically (division visible in the picture of the volume container).
- Enter the schedule and desired duration of administration (here, the **Schedule** box says 'continuous').
- Enter the diluent (5).
- If you tick the **Emergency administration** box (6), a pictogram will be visible on the care plan showing the importance of the administration.
- Fill in the **Condition** box (7) by stating the objective. Using a condition creates a specific display on the care plan. The occurrences will be shaded to clearly show that the administration depends on an objective or assessment such as the VAS.
- Click on **Confirm**.

NB: In the capture, you can see that the sodium chloride was automatically recorded as a diluent ».

Example: *medication order for a continuous flow of 500 IU/kg of Heparin over 24 hours with an undefined administration start time*.

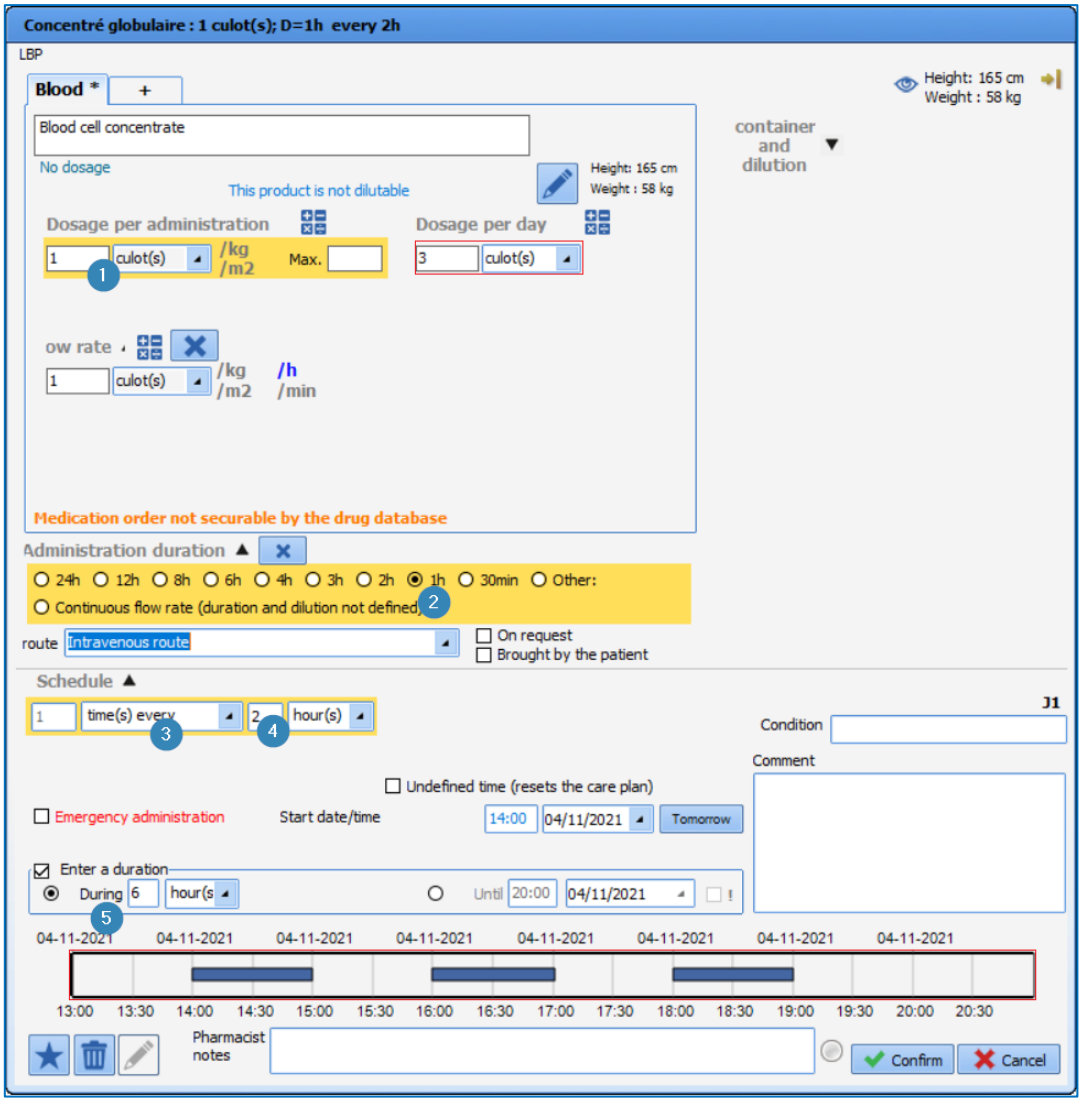


- Type in the first letters of the product
- Select the product you want (heparin) from the list.
- In the **Dosage per administration** field, enter the desired dosage (1) (500 here).
- Change the unit using the drop-down menu if the default unit does not apply.
- Click on **/kg** (2). The daily quantity is then calculated automatically and entered under the **Dosage per administration** field (outlined in red)
- Tick **Undefined time** (4). Ticking this box will allow the nurse to schedule the administration start time, 6 hours after the patient comes out of the OT for example.

NB: hovering over the calculator (3) lets you see the number of calculations performed according to the dosage entered. By double-clicking on one of the displayed values you can automatically use that value for the medication order.

4.7.2.4 Ordering LBP

Example: *medication order for three blood bags*



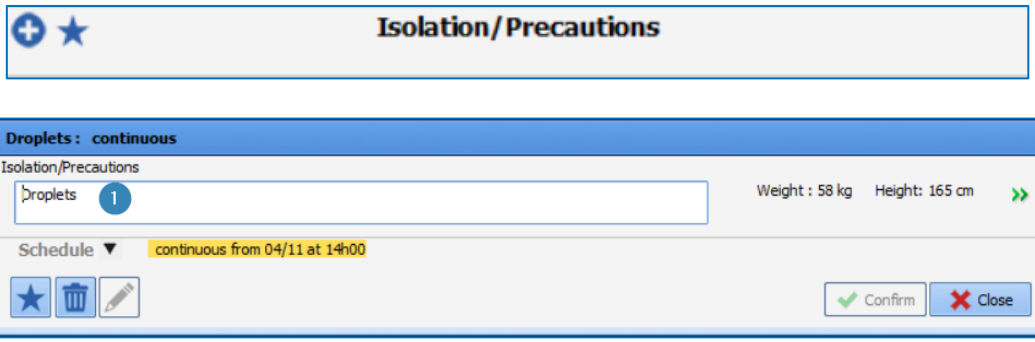
For this medication order you must pay special attention to the schedule so that the care plan has 3 different occurrences.

- Type in the first letters of the product.
- Select the blood product you want.
- Enter 1 blood bag in the **Dosage per administration** box (1) and choose the unit **Blood bag**
- Choose the **Duration of administration** (2). This is the time over which you want the blood bag to be administered.
- Enter the **Route of administration** (for labile blood products, the route of administration is not entered automatically, so it must be entered manually).
- Fill in the schedule (4). Here, it is important to enter a frequency of 'Every X hours' to register the time required between each blood bag.
- Lastly, specify a duration (5) (6 hours here). If you look at the chart display of the administrations (overview of the care plan), you can see that each blood bag is administered over 1 hour with a 1 hour gap, and that only 3 blood bags (occurrences) will be available on the care plan. In addition, if you look at the **Dosage per day** box, you can see 3 blood bags.

4.7.2.5 Isolation/Precautions

Example: *Implementing 'Droplet' type precautions*.

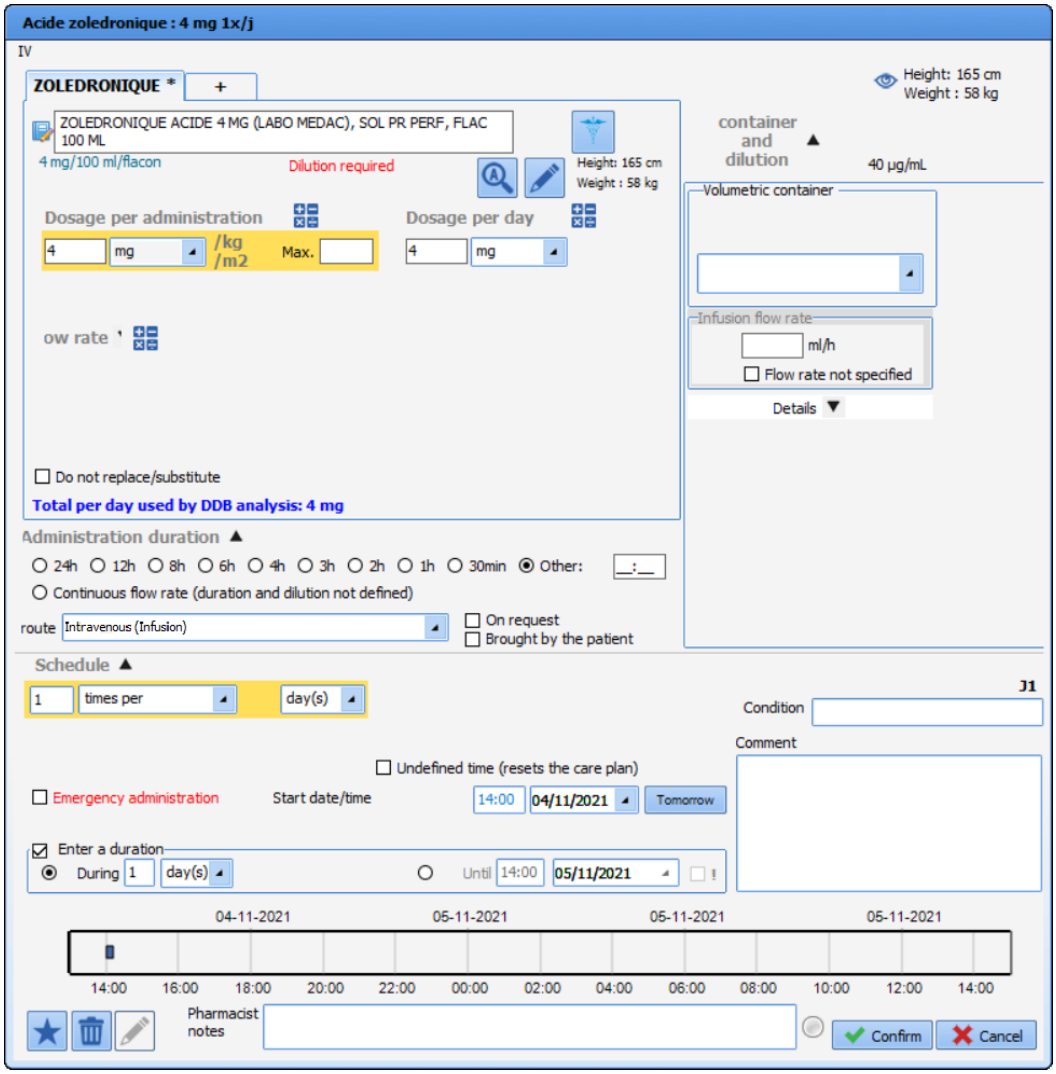
To be able to use all the functions associated with this type of medication order, you must use the field provided for this purpose. Attached to this field are a list and the information icons that are displayed in the application's top ribbon and on the list of hospitalized patients registered in **DIANE**.



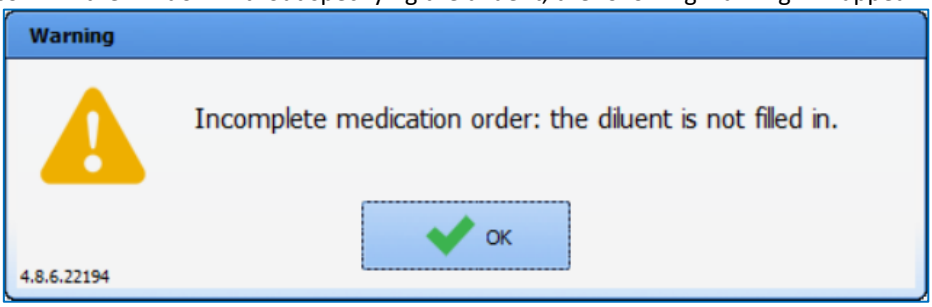
- In the search box (1), type in the first letters to start the search.
- Select the relevant item from the preconfigured list. Only items from this list can trigger the warning.
- By default, the schedule is 'continuous' with no end time. However, you can change it by clicking on the ▼ to access the drop-down menu.

4.7.2.6 Dilution required

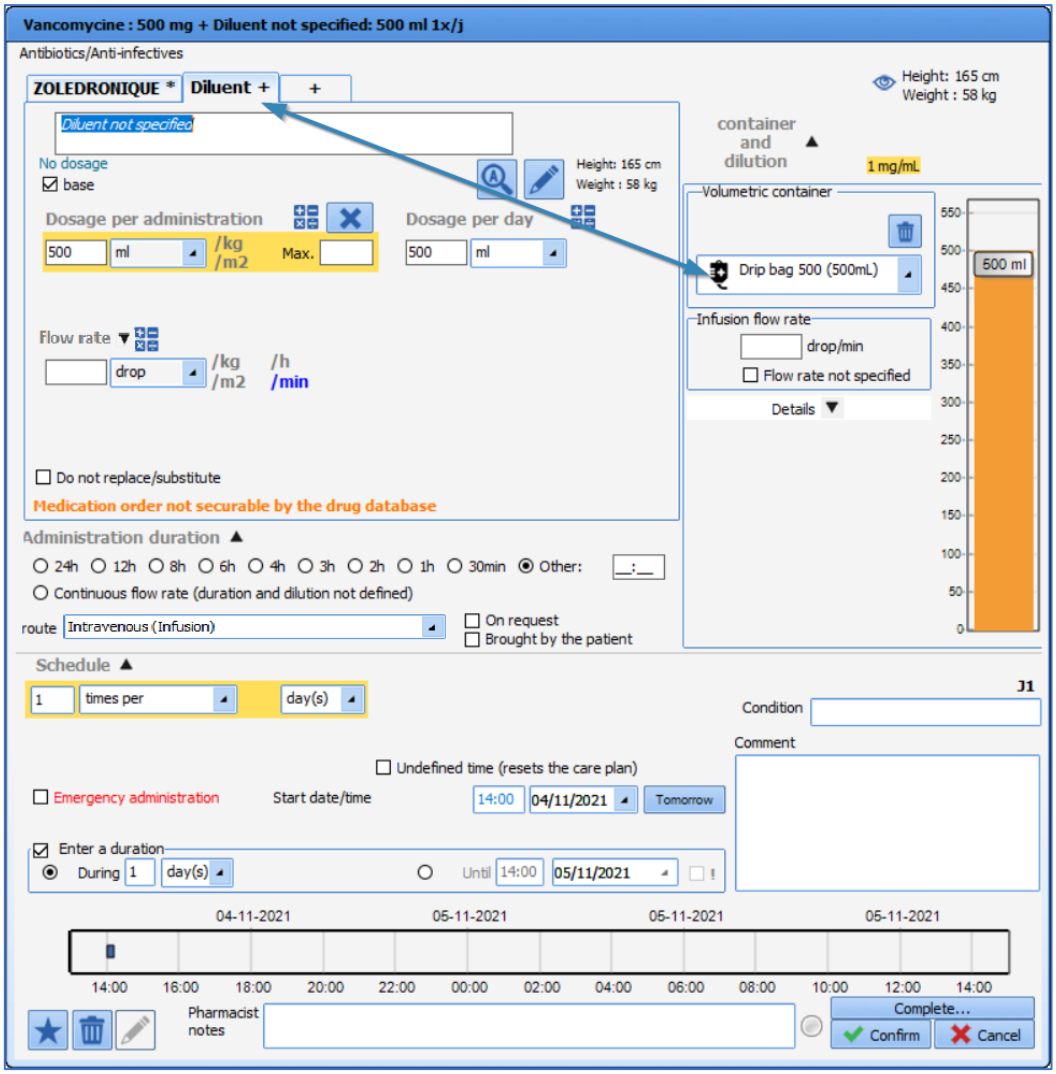
If the **Dilution required** box was checked during setup, '**Dilution required**' appears in red in the medication order window.



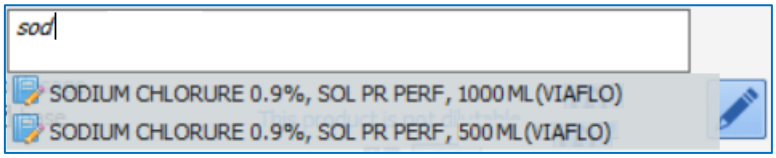
If you try to confirm the window without specifying the diluent, the following warning will appear:



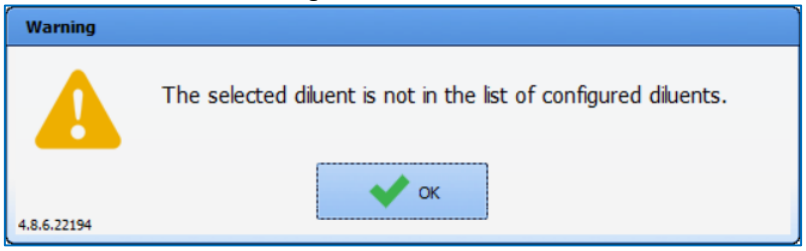
The **Diluent +** tab is automatically generated when the volumetric container is selected.



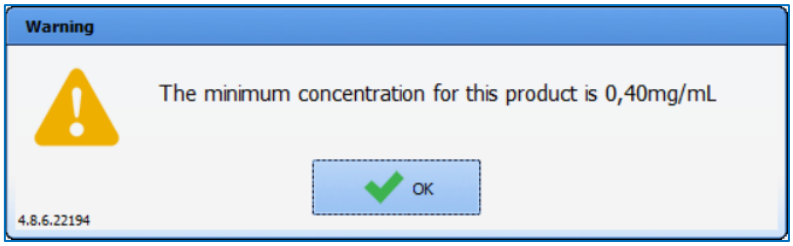
Then you have to enter the diluent. You can only enter a diluent that has been configured. Double-click on the input box to see the list of configured diluents.



If only one diluent has been configured, it is automatically selected when the 'diluent' tab is generated. This tab is named after the diluent.
The diluent must be included in the list of configured diluents for the medication order to be confirmed.

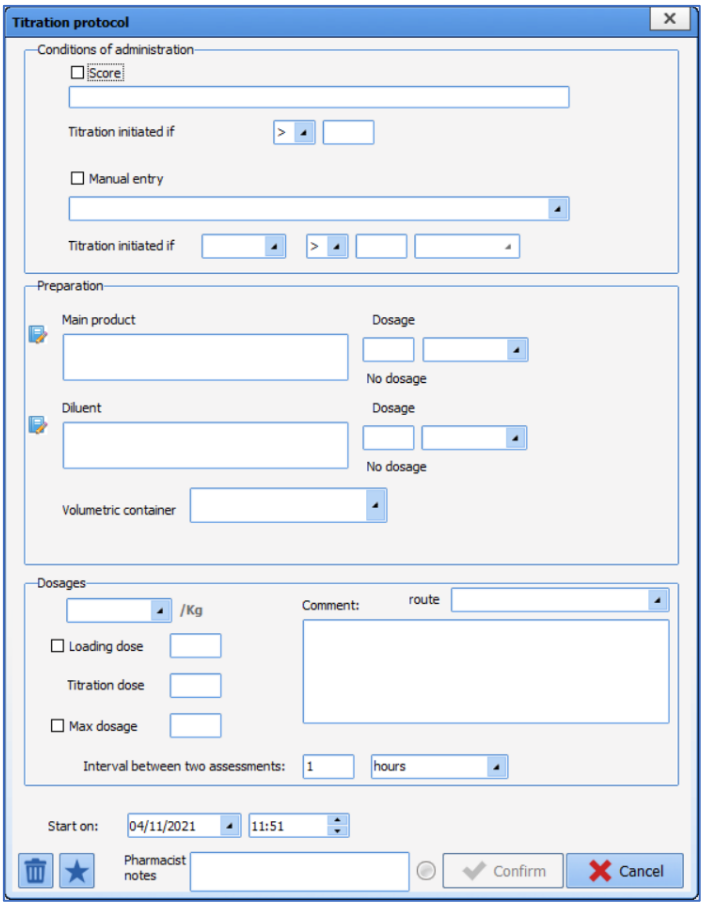


If a minimum concentration has been specified at setup, the medication order cannot be confirmed until this minimum concentration is entered.



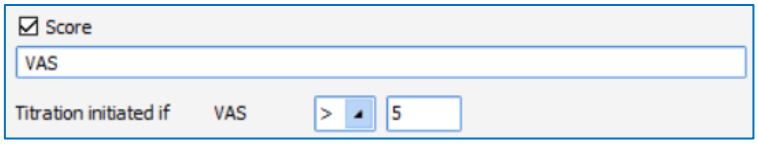
4.7.2.7 Special case of titrations

The **Titration protocol** field in the **Medication order** tab is used for managing titration protocols.

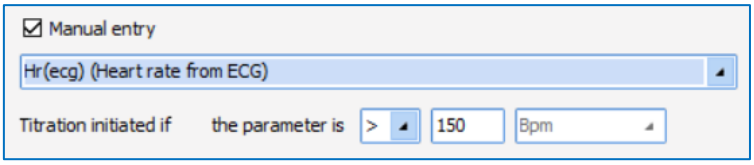


The delivery conditions can be:

- A score: titration is started if the score value is equal to, greater than or less than a value determined at the time of the medication order (*for example, if the VAS score is greater than 5)*

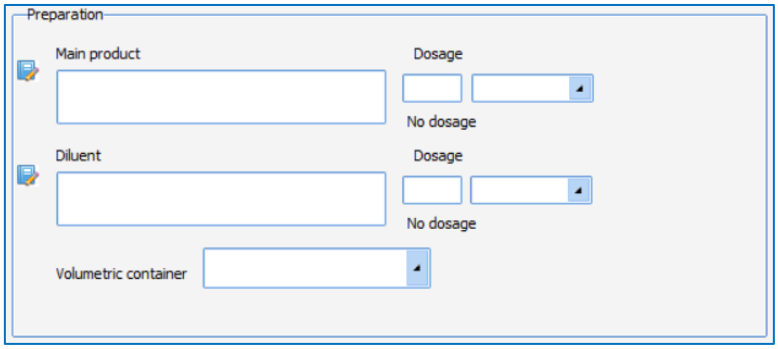


- Manually entered data: titration is started if the parameter value is equal to, greater than or less than a value determined during the medication order (*for example, if the HR is higher than 150)*

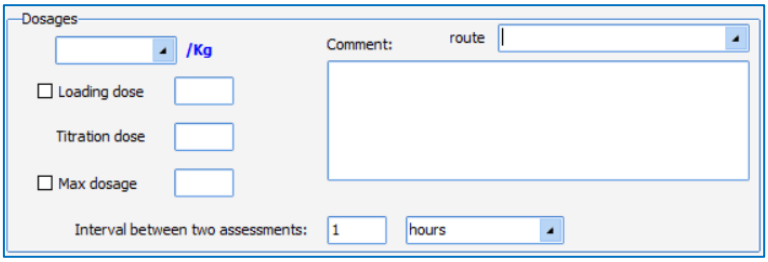


- A score AND manually entered data: titration is started if the value of both the score and the parameter meet the defined conditions. Both checkboxes (score and manual data) must be ticked.

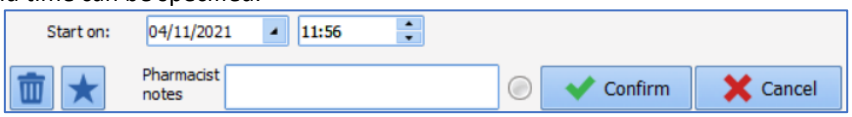
Preparation requires a main product and, where necessary, a diluent (if the main product is set to 'Dilution required', the titration protocol cannot be confirmed until the diluent is specified).



The dosage can be adjusted to the patient's weight (case of children). To do so, click on **/Kg** after the field. It will then turn blue.



The loading dose (administered unconditionally) is optional, i.e. it is not taken into account unless its box is ticked.
The titration dose is the dose delivered whenever required by the patient's assessment.
Max. dose is the maximum dose that can be given to the patient. It must be at least equal to the sum of the loading dose and the titration dose. It is optional, i.e. it is not taken into account unless its box is ticked. The titration protocol is stopped once the maximum dosage is reached.
The route of administration can be specified and a comment can be entered.
The assessment interval (refractory period) is the minimum period required between two assessments. It can be in minutes or hours.
The start date and time can be specified.

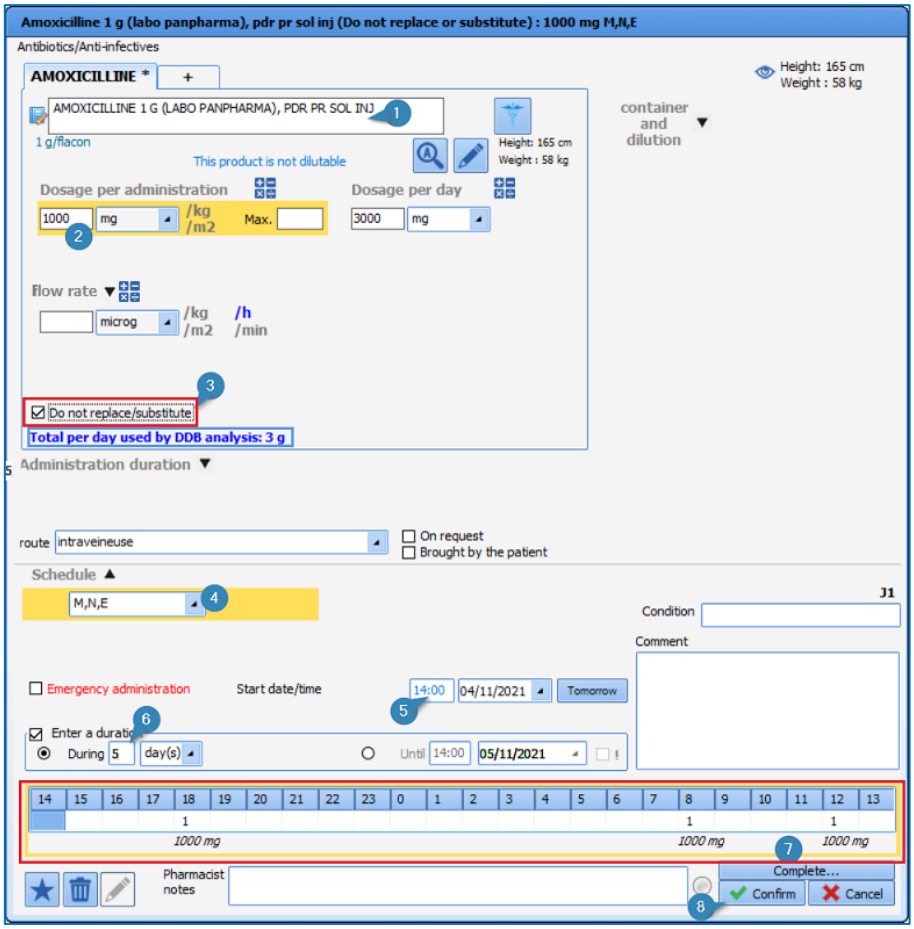


As with medication orders, public and private favourites can be created from a titration protocol.

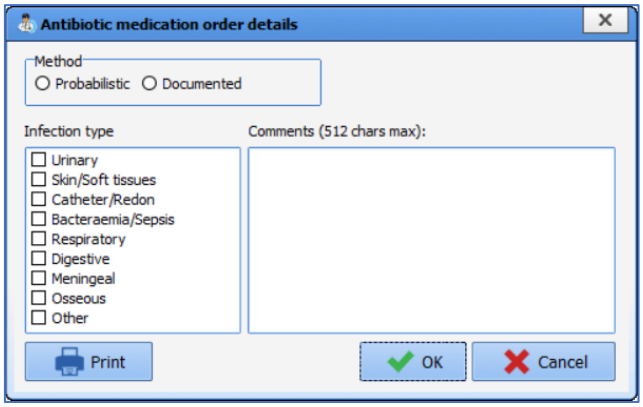
4.7.2.8 Special case of antibiotics

Example: *medication order for Amoxicillin 1 g morning, noon and evening for 5 days from 6 p.m. tomorrow*.

The application can make the monitoring and reassessment of the antibiotic therapy mandatory.



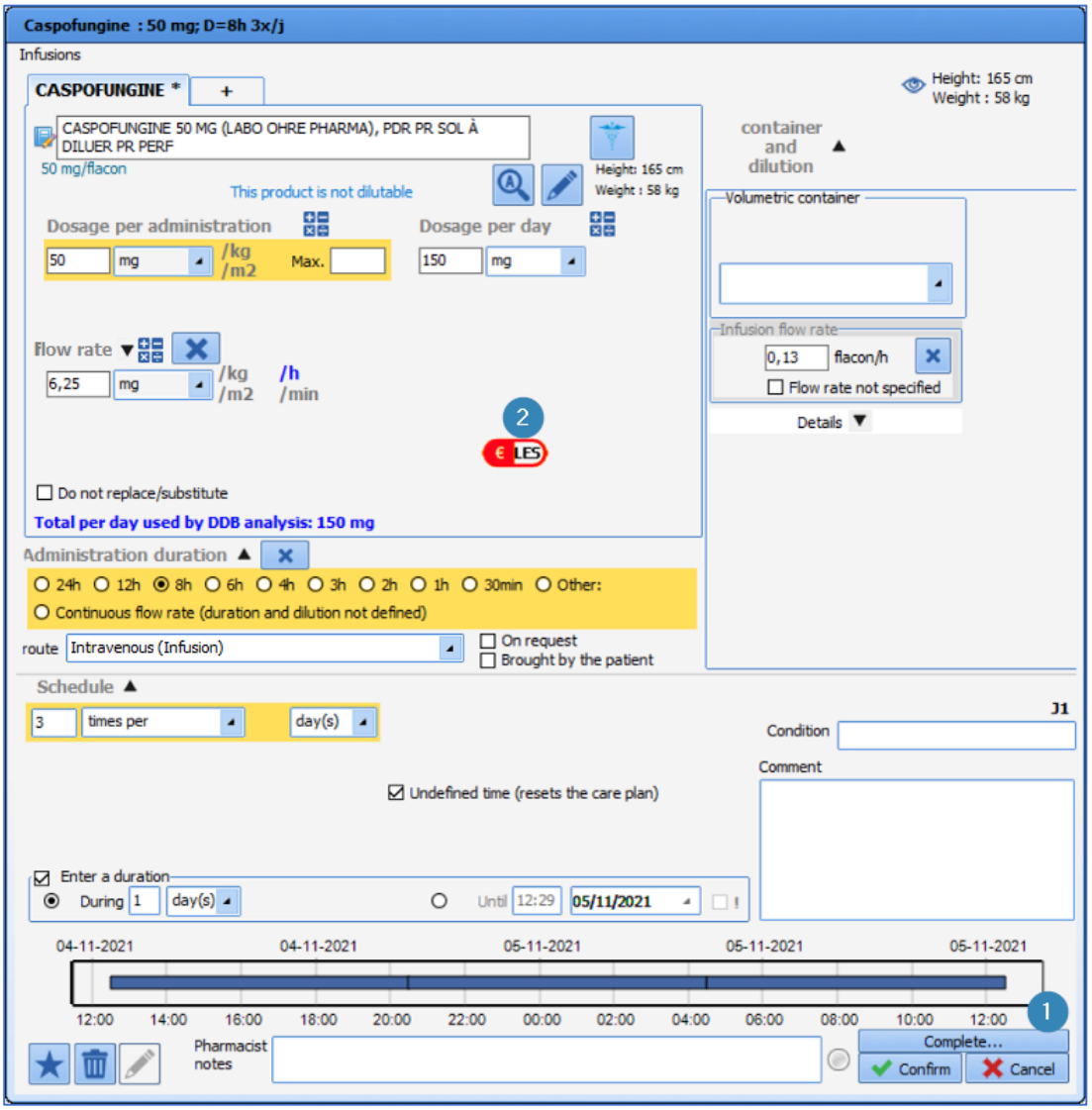
- Start the search by typing in the first letters of the product in the product box (1).
- Choose the antibiotic from the list.
- Check the dosage (2)
- Select the 'Morning, Noon, Evening' Schedule (the application lets you enter default times corresponding to the treatment distribution times, in the example 8 a.m./noon/6 p.m.).
  It is important to know that if the treatment is administered late, this schedule will not shift the following doses).
- Enter the **Duration of administration** (6) you want (5 days here).
- Enter the **Start date/time** (5) by changing the time shown, and by clicking on the Tomorrow button (NB: by default, the date/time shown is always current, so you only need to change this field when you wish to enter a specific administration start time).
- Click on the **Complete…** button (7). This opens a mandatory pop-up window (that blocks the signing of the medication order if not completed) asking you to enter the indication for the antibiotic treatment and whether it is probabilistic or documented.
  Once completed, click on **OK**, then confirm (8) your medication order.



NB: In the screenshot you can see that the dosage used for the drug database dosage analysis is always shown. It is also possible to specify that a product 'Must not be replaced' (3)

4.7.2.9 Special case of expensive drugs (list of additional billable drugs)

Example: *Caspofungine 50 mg slow IV 3 times a day*.

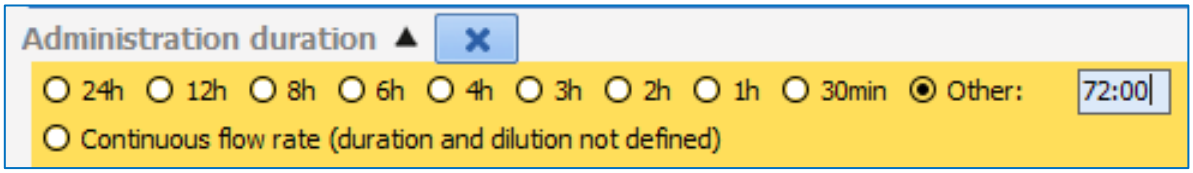


- Select the product you want.
- Enter the items necessary for its administration: dosage, duration of administration, etc.
- Click on the **Complete...** button (1). A pop-up window will appear.
-

The ordering of an expensive product is shown by an icon on the medication order window (2).
As with antibiotics, the application lets you make it compulsory to enter the indication for treatment.

4.7.2.10 Special case of patches

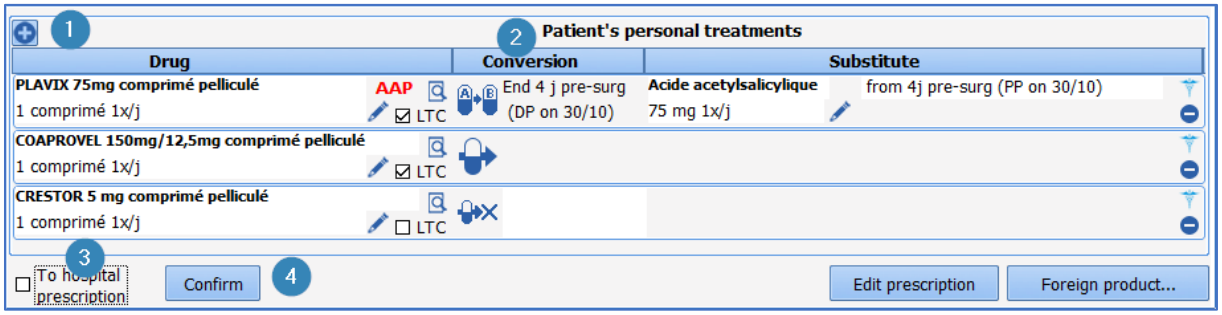
The administration time is limited to 99 hours, which allows patches to be administered.



4.7.3 Import from personal treatment

The application lets you copy the products entered in the **Patient's personal treatments** field in the Doctor tab into the medication order.
When the option is enabled, the products are entered in the **Import from personal treatment** field.

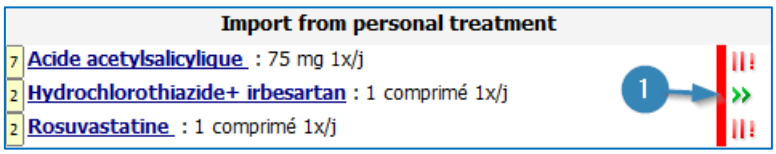
Component for entering the patient's personal treatment in the Doctor tab:



Section 1: Area to enter product: click on the first line Type in the first letters of the product. A list of suggestions opens. Choose the one you want. Enter the dosage and frequency of administration (Plavix 75 mg once daily, here).
Section 2: The **Reconciliation area** lets you specify the treatment management: continue, switch or stop.
In the example above, the treatments are specified as stopped at the current time, which allows the patient's personal treatment to be paused, and only resumed at the appropriate time during their stay.
Section 3: **To hospital medication order**: ticking this box lets you transpose the personal treatment into the **Import from personal treatment field** in the Medication order tab.
Section 4: Click on the **Confirm** button: this opens a window to enter your password and confirm that you want

to send the treatment to the medication order.

Import from personal treatment component in the **Medication order** tab:



The patient's personal treatment is now included in the **Medication order** tab (the product's INN, dosage and frequency of administration are copied).
The marker at the end of the line (1) shows if the treatment has been either continued, switched or stopped.

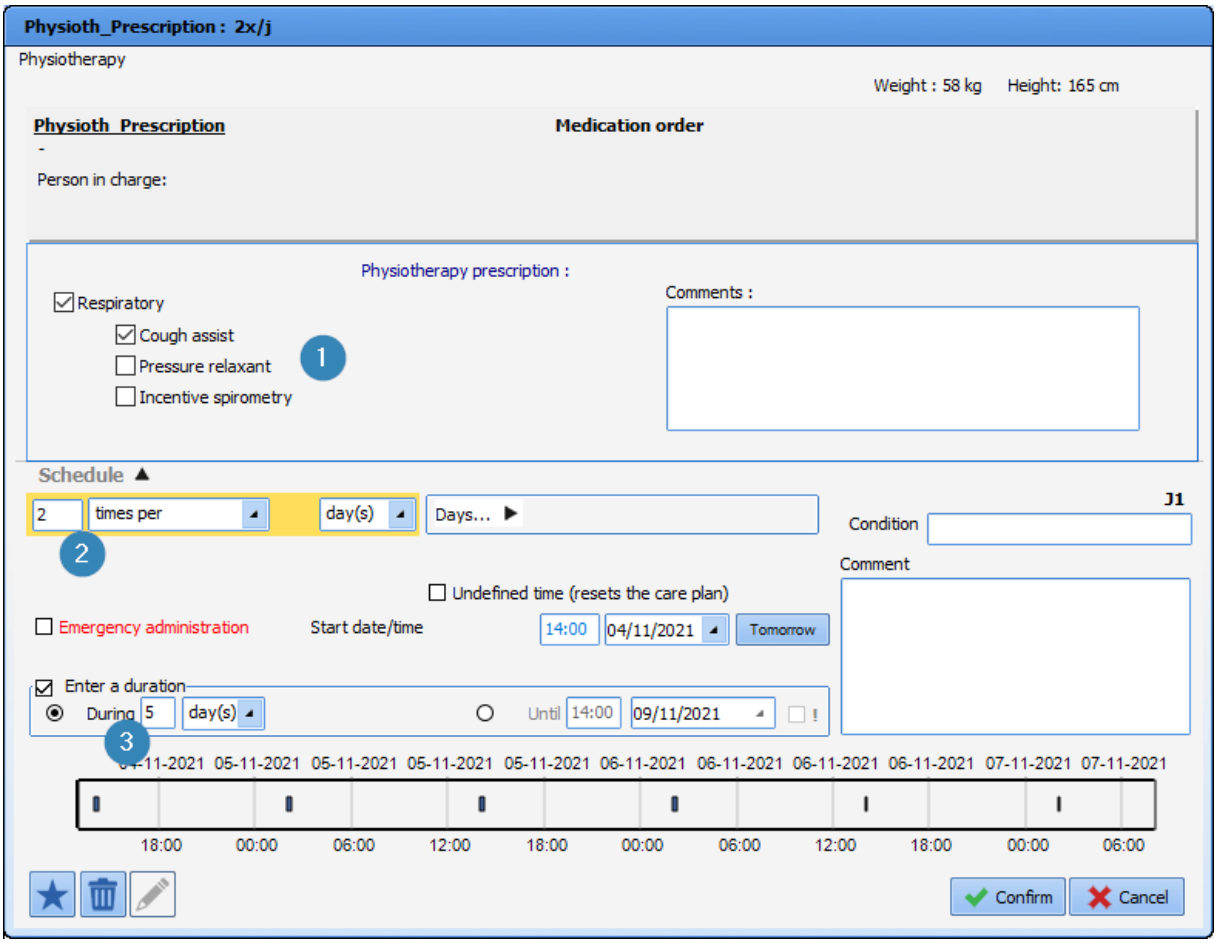
Depending on the option enabled in your facility, you will be able to either:

- renew the treatment by clicking on the red marker to change its status
- or re-enter the medication order in the appropriate field in the **Medication order** tab. In this example the field would be the **Per os** field.

4.7.4 Ordering using free text (food, imaging, etc.)

Medication order fields can call up a specific list. When the field is configured in this way, you can enter free text.

Example: *medication order for respiratory physiotherapy twice a day for 5 days*.



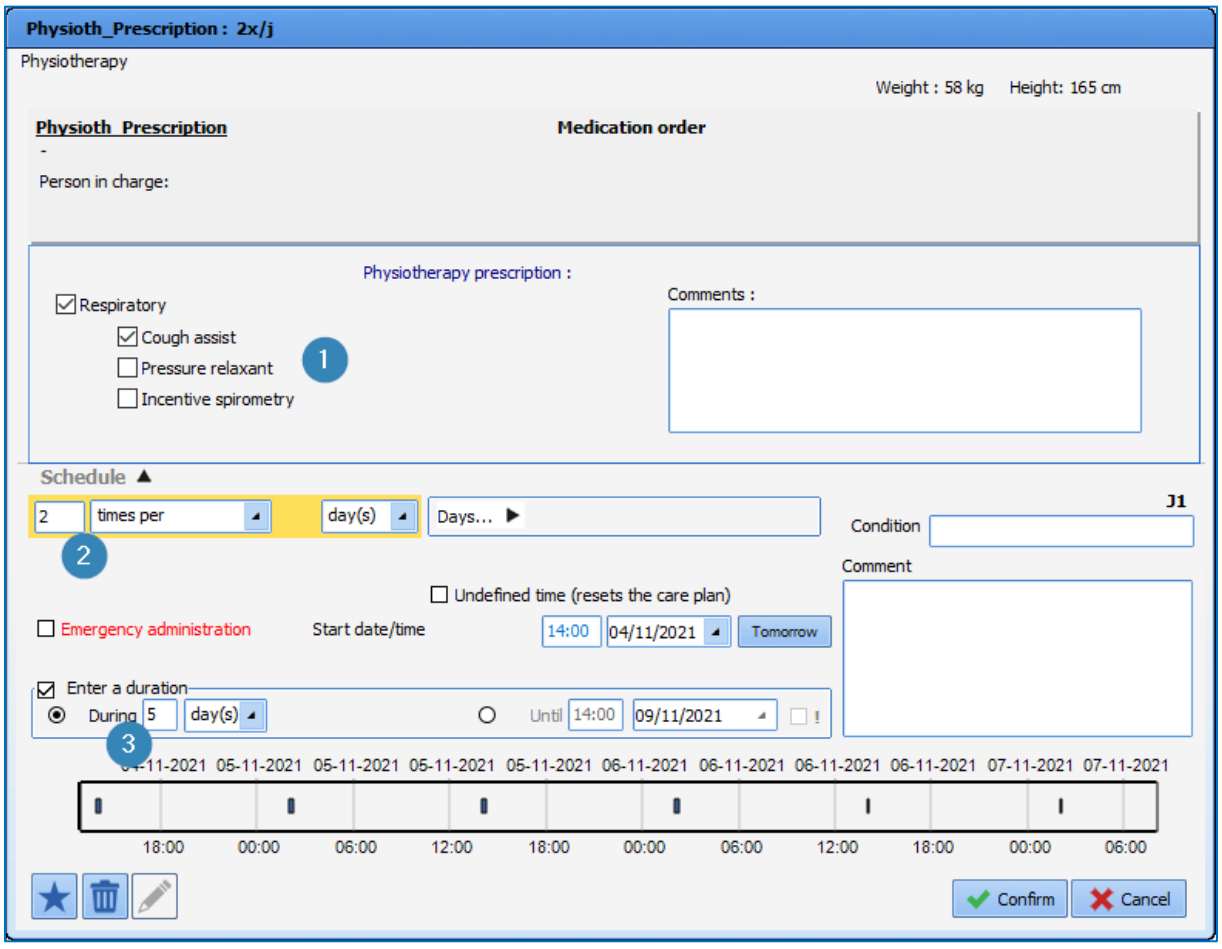
- Enter the desired medication order or instruction (1).

- Enter the frequency (2). Here, it is 3 times a day.
- Enter the duration to apply to this medication order (3). Here, it is for 5 days.
- Click on the **Confirm** button.

4.7.5 Ordering using a detailed entry (physiotherapy, lab test/bacteriology, ECMO, etc.)

For medication orders that require a lot of information (lab tests, renal dialysis, etc.), you can use a form integrated into the medication order window.

Example: *medication order for a lab test when the patient is admitted to intensive care at an undefined time*.

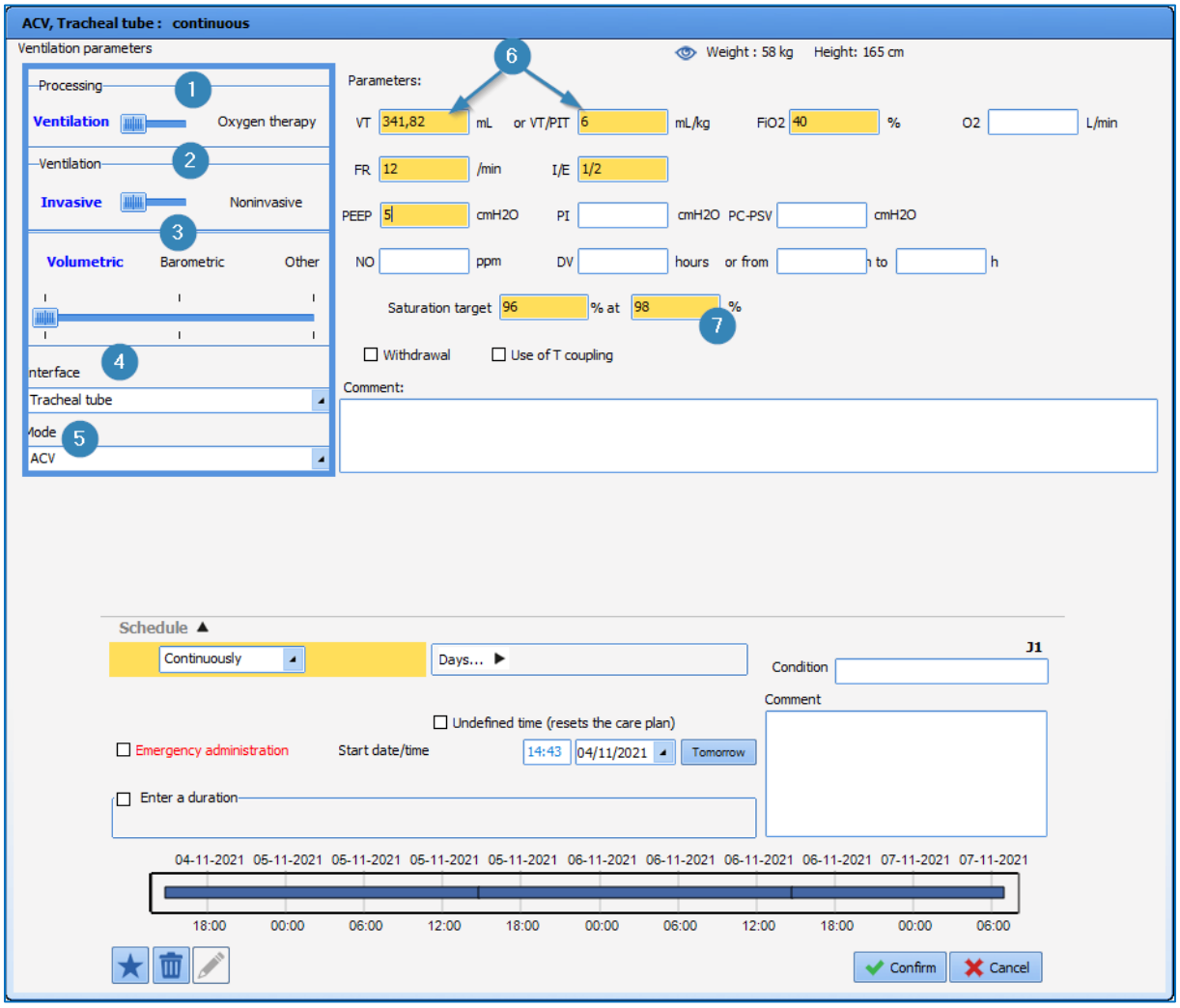


When the medication order window opens, the top part gives you access to the data entry form.

- Tick (1) the lab test items that you wish to prescribe.
- Default value buttons can be configured (2). This lets you save values ticked by default. In this example, clicking on the button (2) will automatically tick the lab test items.
- Fill in the schedule (3). Here the 'one-off' choice means that the prescribed test is done once and will not be repeated. It will automatically be marked as stopped.
  (Scheduling as 'one-off' will require you to create a new medication order if you decide to prescribe this test again.)
- Tick **Undefined time** (4). This will allow the nurse to schedule the blood test time.
- Confirm your medication order by clicking on the button (5).

4.7.6 Ordering ventilation parameters

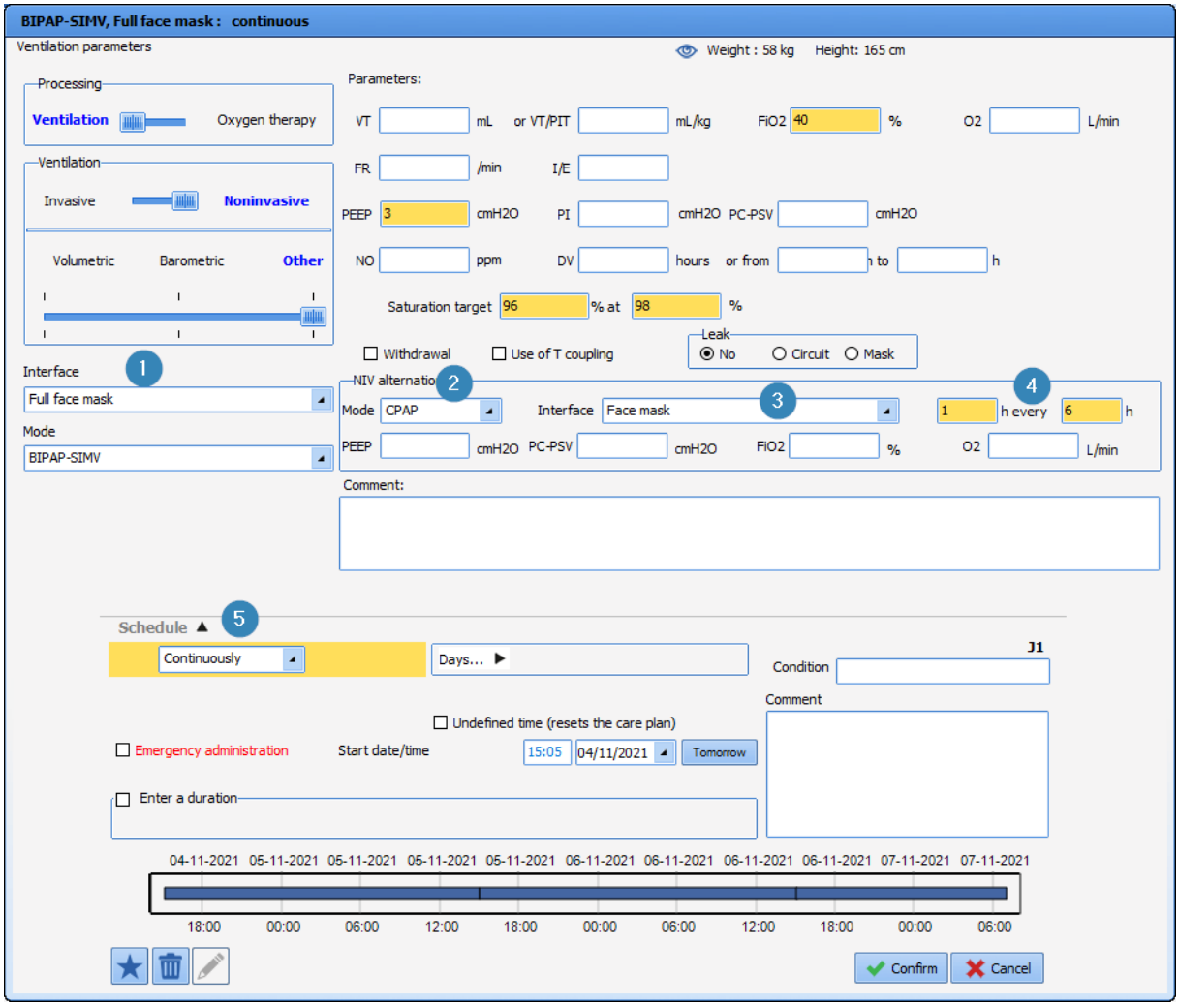
Ventilation or oxygen therapy is prescribed using a specific window adapted to the ventilation method chosen.



The left part of the window (blue outline) must be completed first.
This area lets you use the different input fields depending on the treatment and the ventilation method chosen.
It has five sections:

Section 1: **Treatment**: choose between **Ventilation** and **Oxygen therapy**.
Section 2: **Ventilation**: choose between **Invasive** and **Noninvasive** ventilation.
Section 3: choose between **Barometric**, **Volumetric** and **Other** ventilation method.
Section 4: **Interface**: used to enter the interface chosen for ventilation or oxygen therapy.
Section 5: **Method**: used to enter the ventilation method.

NB: In sections 1, 2 and 3, select your choice by moving the blue cursor from left to right.
The boxes with a pink background must be filled in. They are adapted to the ventilation method.
Section 6: lets you enter the VT/PBW in mL/kg. When you enter this the VT is calculated automatically.
Section 7: this section is used to enter the saturation targets.

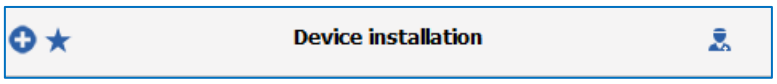


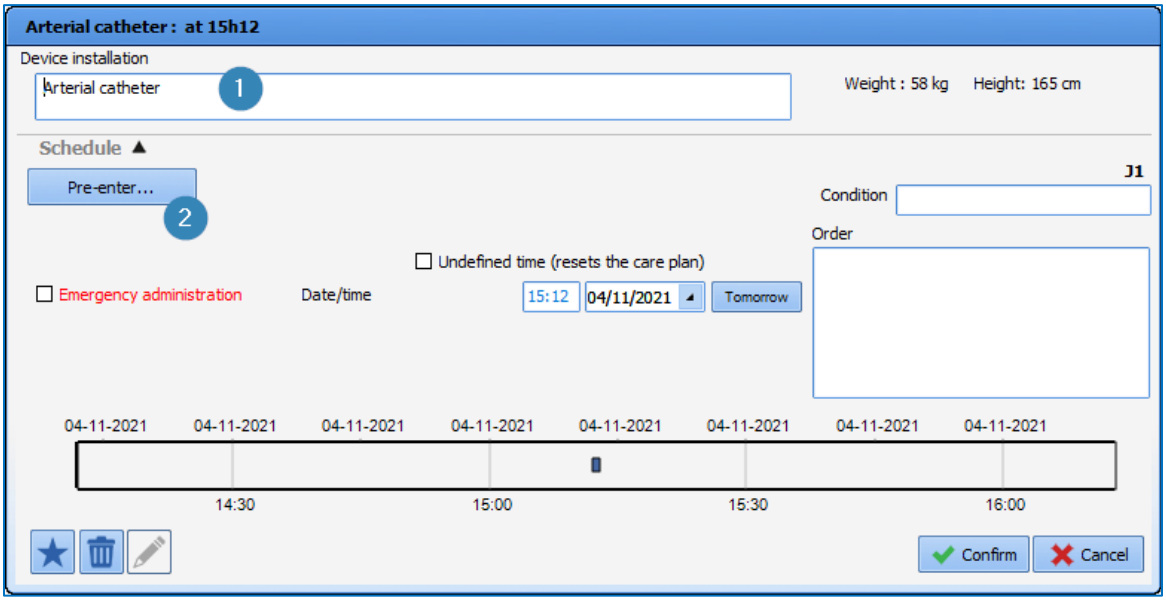
Depending on the method (1) chosen, it is possible to prescribe alternated ventilation (2) with NIV for example.
You can then enter two different interfaces in (1) and in (3) and enter the alternation pace you want (4).
In this configuration, the Schedule (5) applies to the primary method that is determined in the left part of the window.

4.7.7 Ordering medical devices (placement and removal)

4.7.7.1 Adding a care item via the Medication order tab

The placement of a care item is prescribed from the **Add device** (care item) field in the **Medication order** tab.



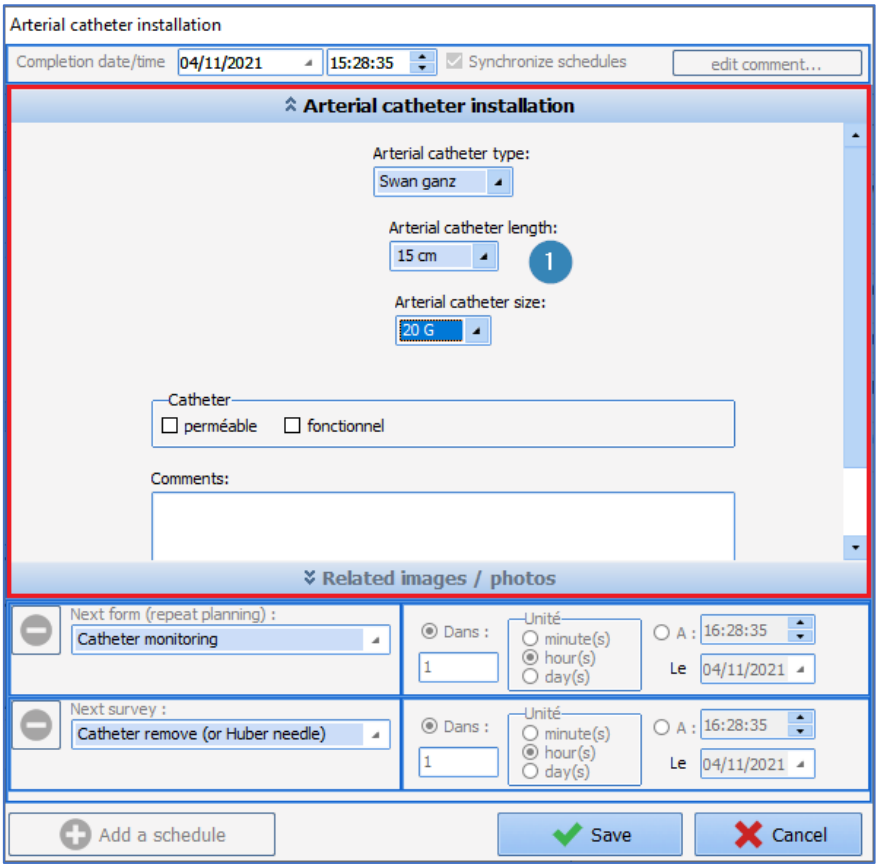


Area 1: Area to enter the device: area to enter the desired insertion.

- Click in the box and type in the first letters. A list opens showing the available devices. Double-clicking in this area (1) opens the complete list of devices.
- Select the device you want. Here this is 'Arterial cath'.

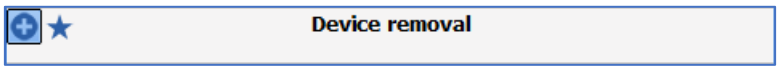
Area 2: Call button for the placement form: the initial form used to enter details about the care item can be completed from the medication order.

Only the form (1), outlined in red, can be completed.



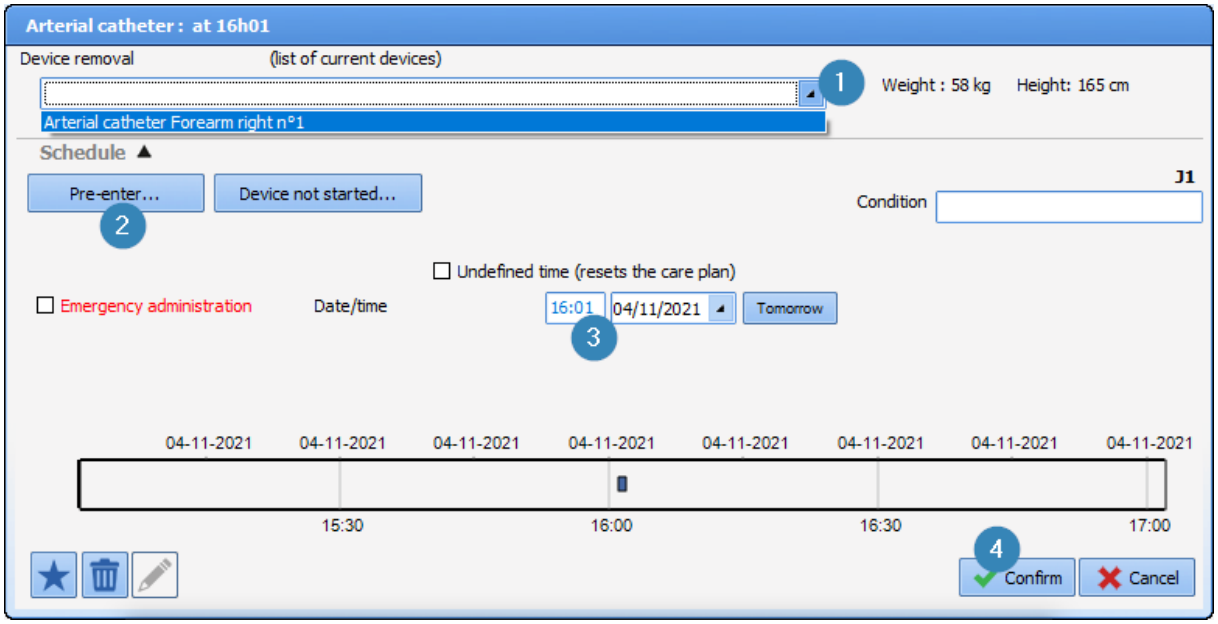
4.7.7.2 Removing a care item via the Medication order tab

The removal of a device is prescribed from the **Remove device (care item)** field in the **Medication order** tab.



The window to prescribe the removal is identical to the placement window. They are used in the same way.

- In the search box (1), enter the type of device you would like to be removed. Choose from the list of proposals or double-click in the search box.
- Only care items with a removal form will be offered.
- You can prefill the removal form or not (2).
- Enter the removal date/time (3).
- Confirm your medication order by clicking on the button (4).



NB: A warning is displayed if the removal prescribed is for a care item that is already finished or not started.

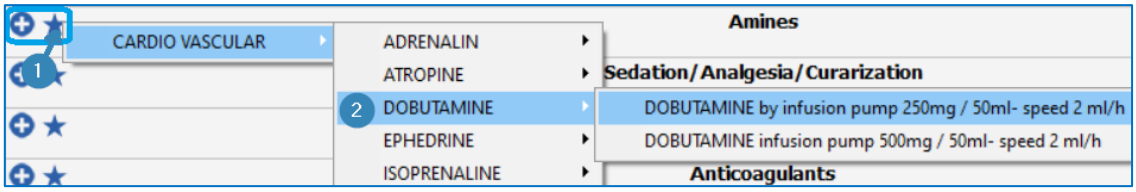
4.7.8 Medication order favourites

Several shortcuts have been integrated in the application to make it easier to write medication orders.

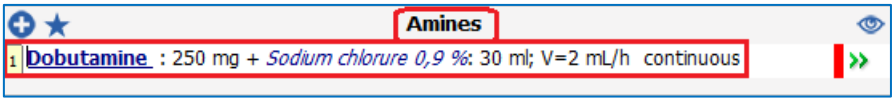
- 'Favourites': these are prefilled medication orders available for each field.
- **Load a medication order (Add)**: these are protocols to fill in a set of medication orders in different fields in one click.
- **Load a medication order (Replace)**: these let you replace the current medication orders with a new protocol.

Using a favourite:

Favourites are configured for each medication order field. This lets you limit the list of suggestions.

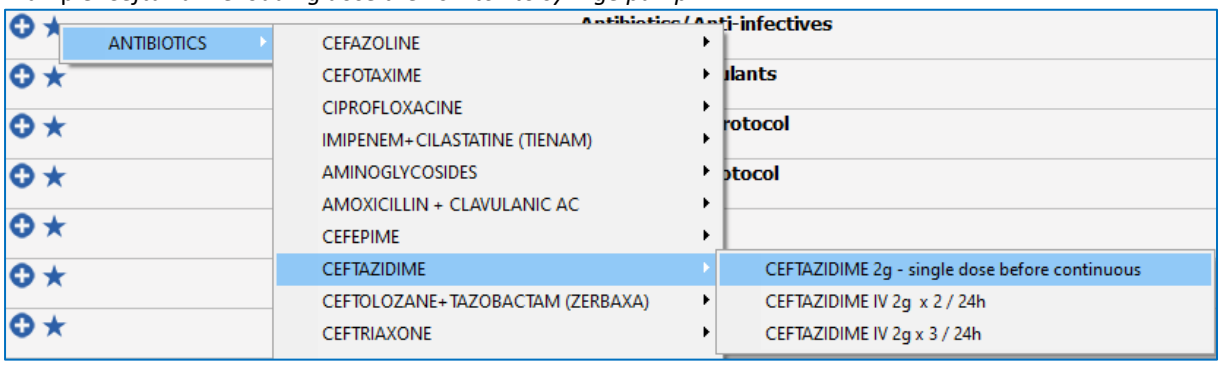


- Area (1): Area to create a favourite: Create the favourites menu accessible in the field. There are two ways:
  - Left-click on the star ★
  - Right-click on the plus sign ⊕
- Area (2): Favourites menu: the list of favourites available for the field opens. In this example, we are in the **Amines** field, so only favourites belonging to the **Amines** field are suggested.
- Click to select the favourite you want to prescribe. The favourite is automatically entered in the field.

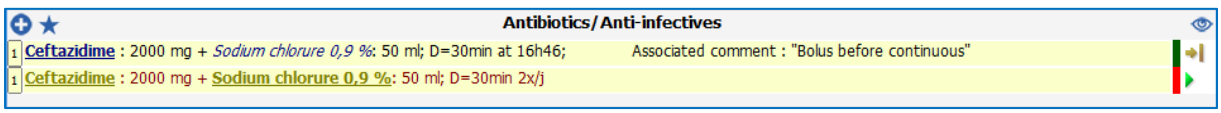


- If you want to edit the medication order generated by the favourite or check its content, click on the product line to open the medication order window.

NB: using a single favourite you can prescribe multiple medication order lines in the same field.
Example: *Ceftazidime loading dose then switch to syringe pump*



- Select the favourite. Here, Ceftazidime slow IV 2 g - single dose - before syringe pump then switch to syringe pump.
- The favourite is automatically entered into two separate medication order lines:
  The first giving the medication order for the loading dose, which is configured as a single dose so as not to be repeated.
  The second integrating the switch to the syringe pump, scheduled to start after a time lag of 12 hours, which will therefore be available on the care plan 12 hours later to make the switch and to avoid simultaneous administration.

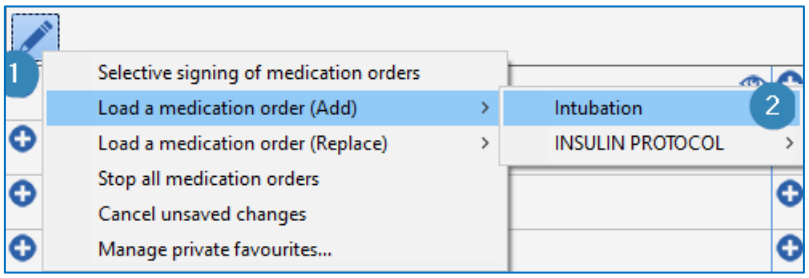


Public favourites must be approved by a key user who has permission to do so. If a favourite is not approved, a message indicating this will appear on the screen. This does not apply to private favourites.

4.7.9 Medication order protocols

The application also lets you prescribe medication order favourites in several different fields with just one click. This is done by using the pencil icon at the top left of the **Medication order** tab.

Load a medication order (Add): using presaved protocols this option lets you enter medication order favourites in several medication order fields at the same time.



Area (1): Pencil icon: area giving access to the medication order menu.

- Click on the pencil icon.
- Select the **Load a medication order (Add)** option to open the add medication order menu (2).
- Click on the protocol you want to prescribe.
- This loads automatically.
- You can, if you wish, change or check the favourites loaded in this way by clicking on the medication order line.

Example: *Load a medication order (Add): Intubated patient admission*.

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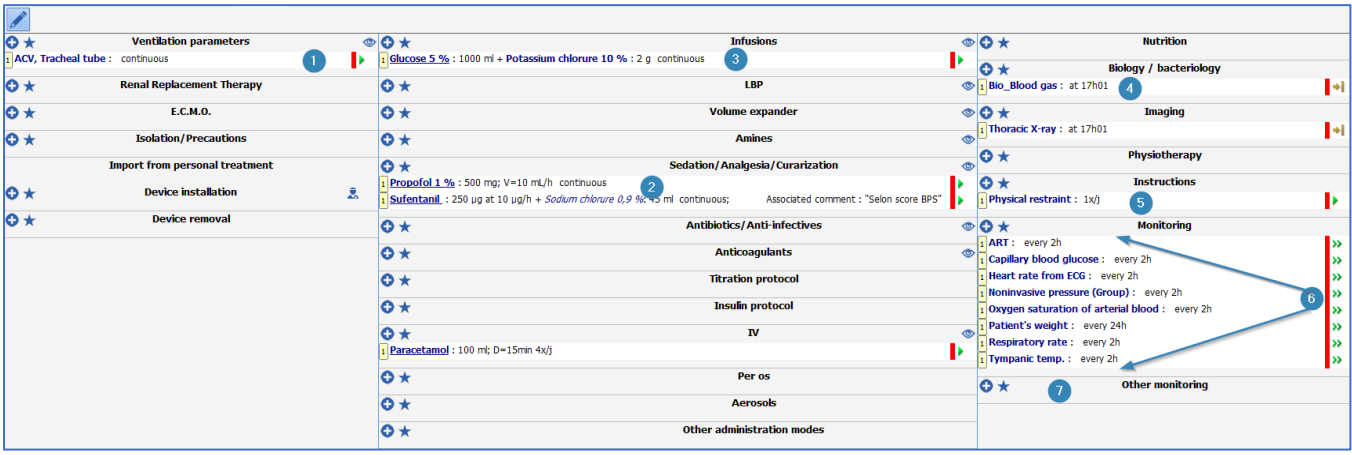
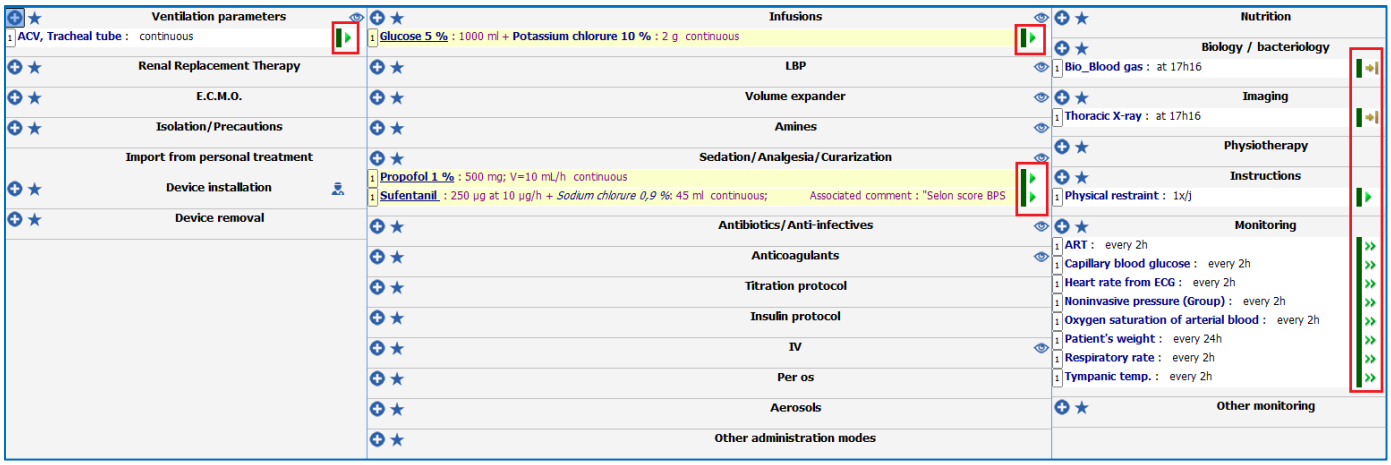


In this example, you can see that by calling up the protocol you can prescribe

- Treatments: in the **Infusion** field (3), in the **Sedation**/Analgesia/Curarization field (2).
- Monitoring and instructions: in the **Monitoring** field (6), **Other monitoring** (7) and in the **Special instructions** field (5).
- Patient ventilation: in the **Ventilation parameters** field (1).

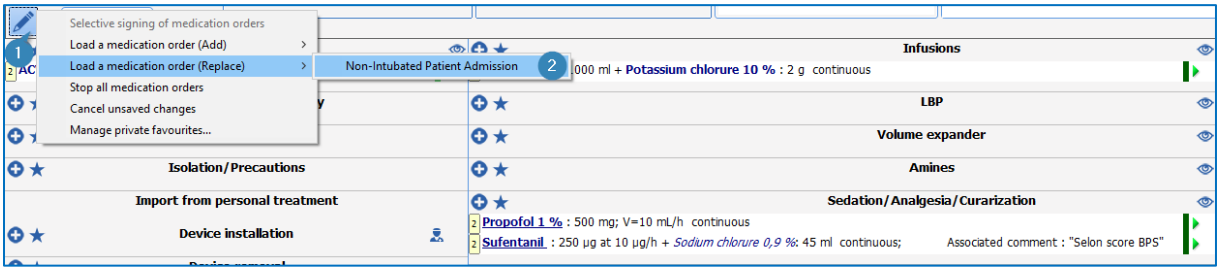
Load a medication order (Replace): This option will replace the current medication orders.
The status of the current medication orders will be 'stopped' and no longer be active in the care plan when you sign the medication order.

Example: let's keep the previous example where we **Load a medication order (Add)**: Intubated patient admission and let's use **Load a medication order (Replace)**: Non-intubated patient admission.



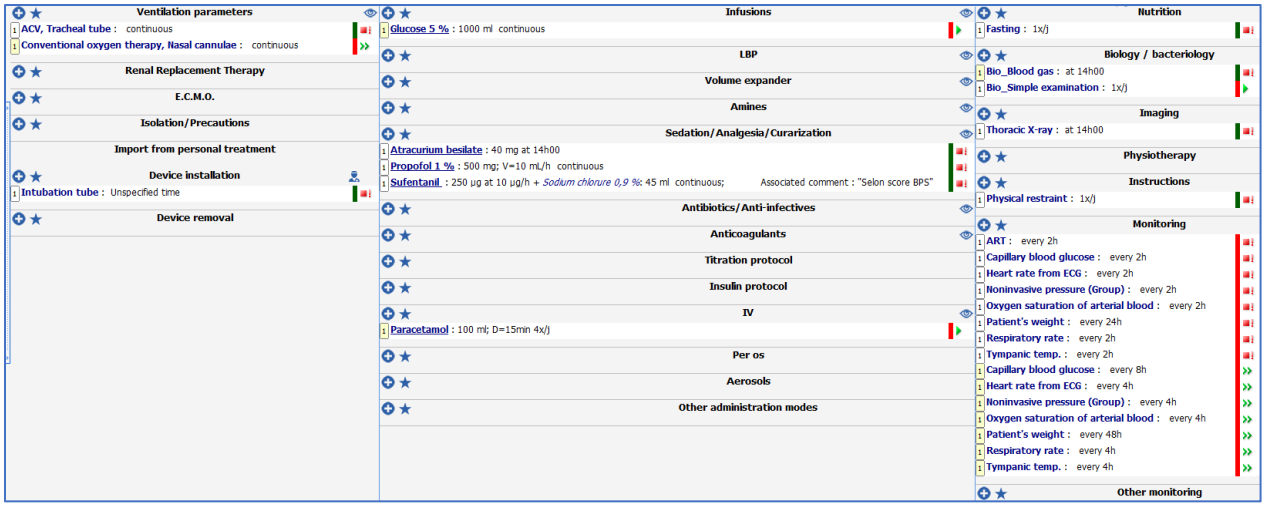
In the above screenshot all the **medication order lines are current**. They are **visible in the care plan (area outlined in red)**.

We will now **Load a medication order (Replace)**: Non-intubated patient admission.



Pencil icon: area giving access to the medication order menu.

- Click on the pencil icon (1).
- Select the **Load a medication order (Replace)** option to open the add medication order menu (2).
- Click on the protocol you want to prescribe (here, non-intubated patient admission).



- All the current medication orders are marked as stopped. (1)
- The chosen protocol is loaded automatically. It will therefore **Replace** the previous medication orders (2).

The pencil icon gives you access to other options:

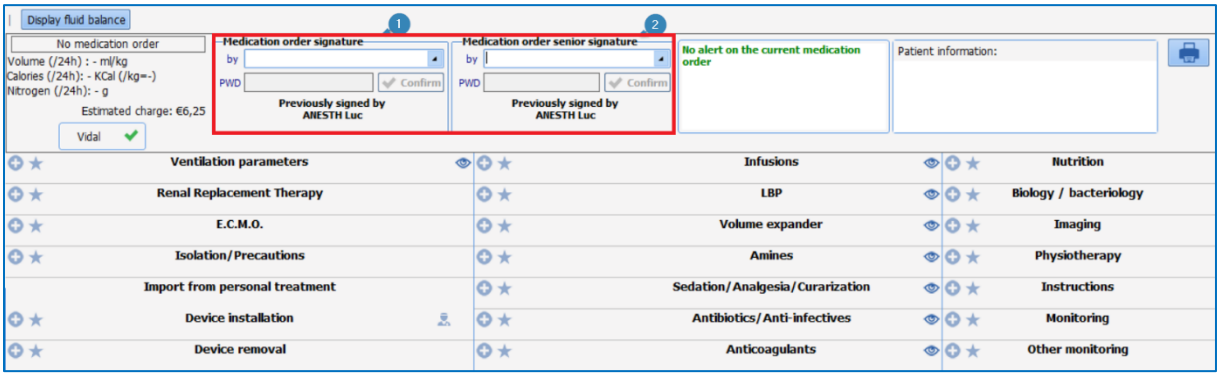
- **Stop all medication orders**: used to immediately stop all current medication orders.
- **Cancel unsaved changes**: lets you delete all changes made since the medication order was last signed.

4.7.10 Confirming and signing the medication order

4.7.10.1 Signing of all medication orders

When you write a medication order, it must be **MUST BE SIGNED** to ensure it is actually created and therefore visible on the care plan.

To do this, you must enter your login and password in the **Signature for medication orders** component located in the **Medication order** tab ribbon.

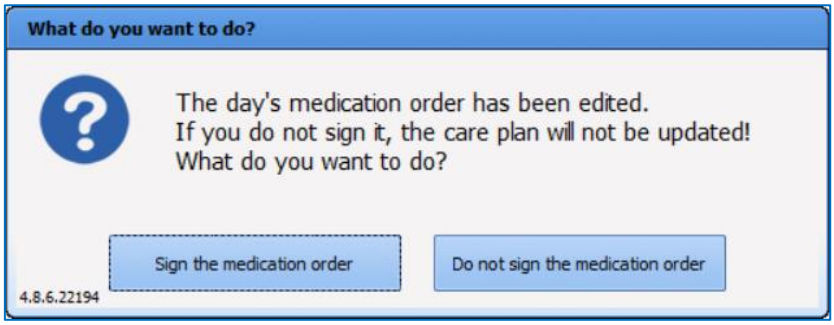


Two components can be available to be able to sign (1) and for the senior doctor to countersign (2) if your facility receives medical students.

Various permission options are available for the issuing and signing of medication orders.

- **Medication order authorized, signature required**: the foundation doctor can issue medication orders but the care plan will not be be generated until the senior doctor signs them.
- **Medication order and signature authorized**: the foundation doctor can issue and sign medication orders. In this case the care plan is generated. The senior doctor's countersignature will confirm that the medication orders have been checked.
- **Signed medication orders only**: in this case, some medication order lines will only be visible in the care plan once the senior doctor has signed.
  For example: narcotics, etc.

NB: A medication order automatically saved while it is being written. However, it does not generate the care plan until it is signed.
When you change tabs, a message will remind you to sign the medication order.



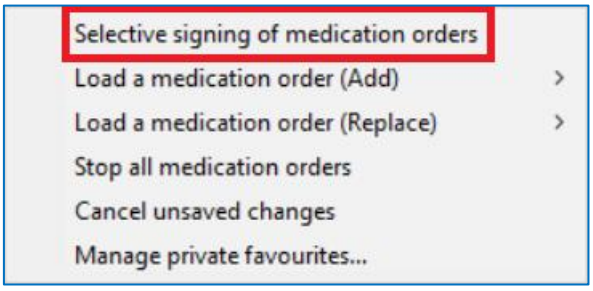
Medication order signature shortcuts

Keyboard button	Function
F2	Go directly to the **by** (login) field of the **Medication order signature** component
F3	Go directly to the **PW** (password) field of the **Medication order signature** component
F4	Go directly to the **by** (login) field of the **Medication order signature by senior** component
F5	Go directly to the **PW** (password) field of the **Medication order signature by senior** component

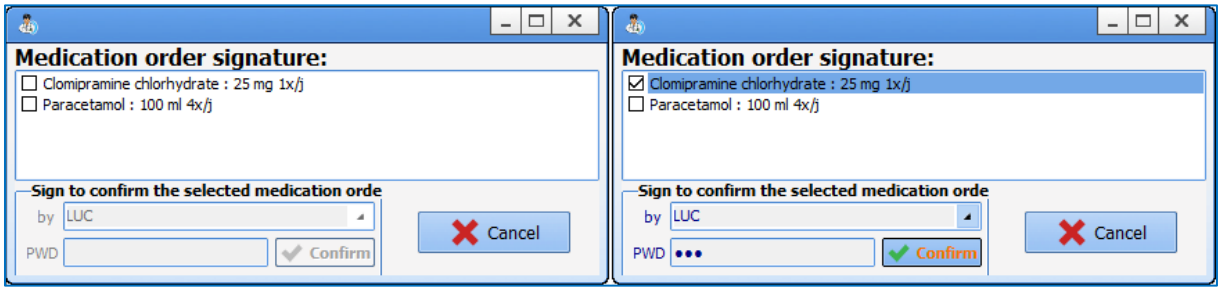
4.7.10.2 Selective signing of medication orders

DIANE allows medication orders to be confirmed one by one. A medication order is analyzed by looking at which drugs already have a signed medication order and which drugs have medication orders that are in the process of being signed. Drugs selected for selective signing are not included in the analysis.

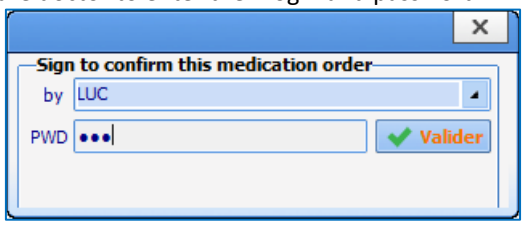
To access selective signing of medication orders, click on the button in the **Medication order** tab. The following menu appears:



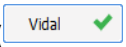
Click on Selective signing of medication orders to display the menu below. Simply tick the boxes next to the medication orders to be signed. As soon as one box is ticked, the doctor can sign using their login and password.

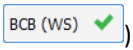


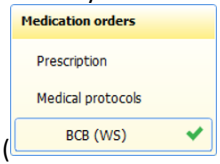
Medication orders can be confirmed line by line by right-clicking on an unsigned medication order. A signature window will appear prompting the doctor to enter their login and password.

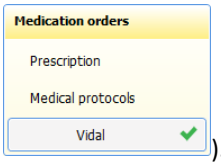


4.7.11 Drug database report

The **DIANE** application is connected via an API to a drug database (either Claude Bernard or Vidal database, depending on your facility) to prescribe safely.
When the software is properly connected to the drug database you will see the ✔ icon on the medication order (

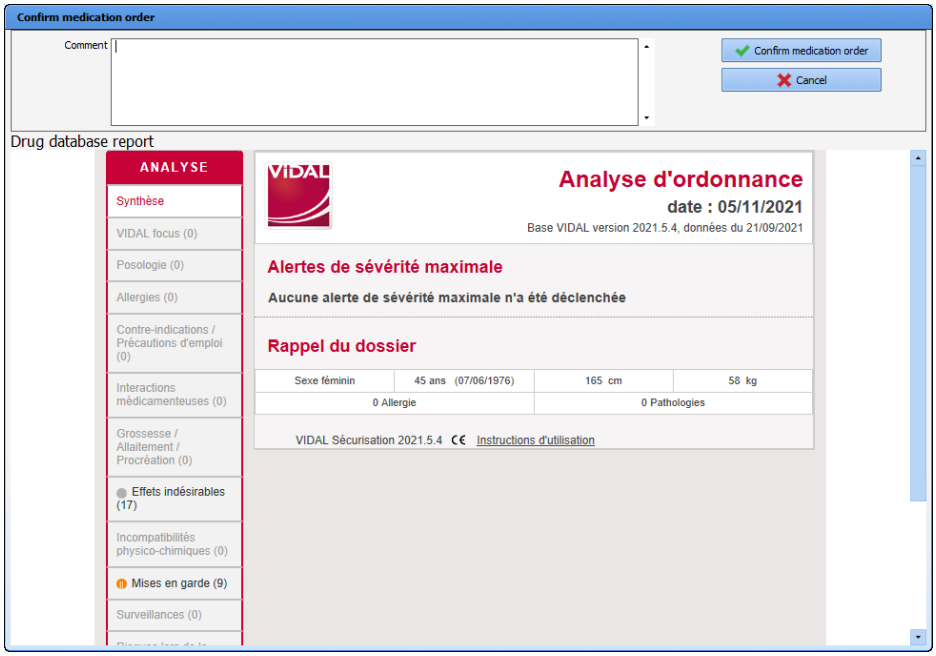
or 

) and on the **Main menu** tab (

or 

). However, if this icon is red ⚠, this means that there is a connection problem. You must contact your facility's IT department to reconnect.

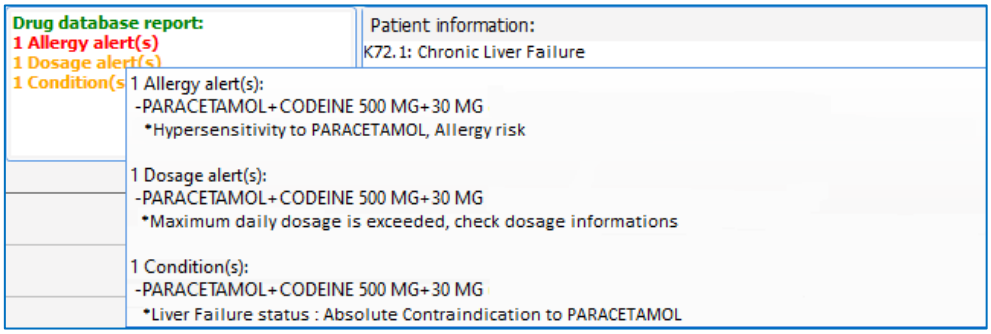
When the medication order is signed, a full report issued by the drug database opens, which you must confirm that you have read.



When you click on the **Confirm medication order** button, the medication order is signed and the care plan is generated.

A summary is always visible in the **Medication order** tab showing any allergies, interactions, etc.

By hovering over this section you can view the details.



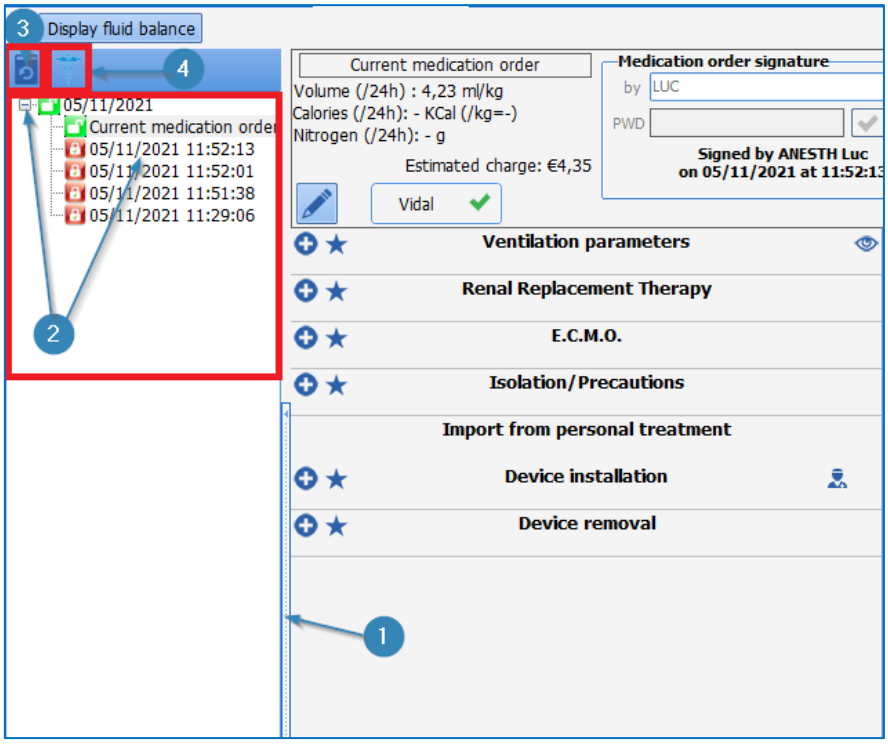
You can see the full report again at any time by double-clicking on the **Drug database report** area.

Colour code:

Red: Allergy warning.
Orange: Dosage, interaction, contraindication and medical condition warning.
Black: Redundancies and precautions for use.

4.7.12 Medication order history

The application lets you easily see the patient's medication order history.

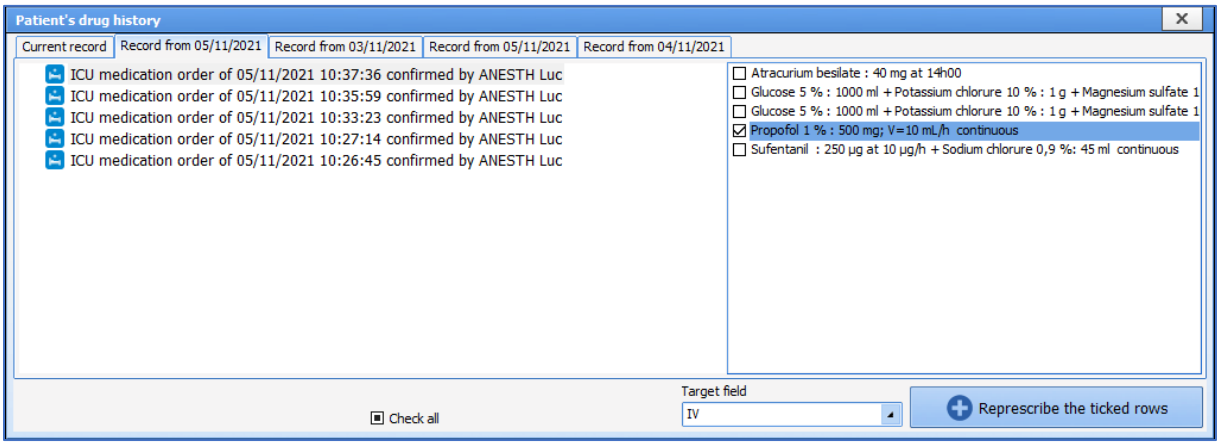


1. Medication order history:
   Shows the different changes made to the medication orders during the stay.
   - Click on the arrows to the left of the **Medication order** tab. 1
   - Opens the signature history in chronological order. 2
   - Select the date and time you want to see.
   - The medication order is then displayed as it was.

Icon legend:
Current medication order (not signed)
Past medication order (signed)

4.7.12.1 Patient's drug history

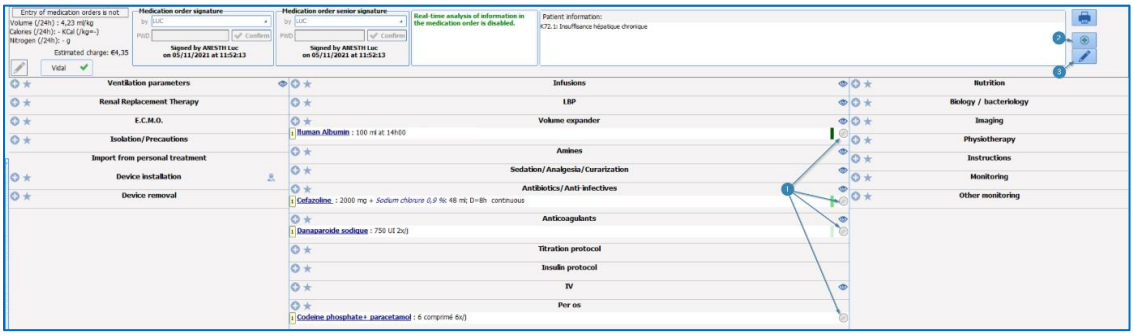
View patient's drug history (3) lets you see the different drugs prescribed to the patient during their different stays.



View history of the additional data associated with the record's medication orders lets you see additional information entered when ordering antibiotics and additional billable drugs.

4.8 Pharmacy confirmation

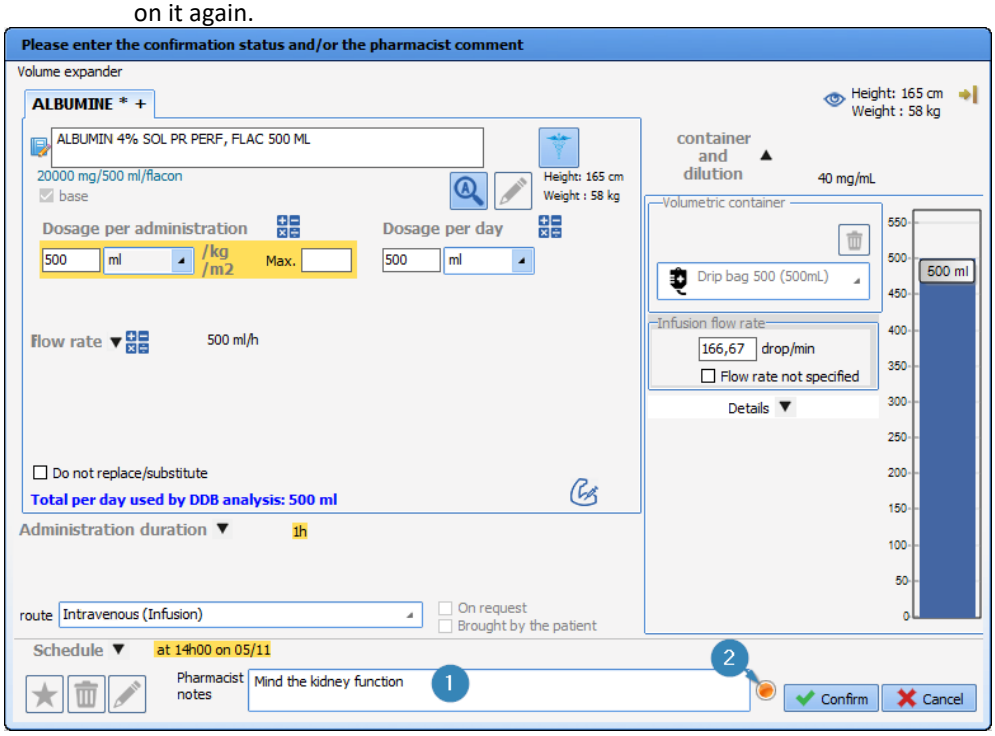
The application can manage pharmacy confirmations. To facilitate this, the entire record is accessible in read-only mode.



Several options are available for pharmacy confirmations.

4.8.1 Line-by-line confirmation:

- Click on the grey ball at the end of the line. The ball turns green. The medication order line is now confirmed.
- If you click again, the medication order window opens and you can add a comment in the line provided for this purpose.
- When a comment is entered the ball immediately turns orange.
- If you want to stress the importance of this comment, you can turn the ball red by clicking on it again.



4.8.2 Aggregate confirmation of a medication order

Lets you confirm all the lines in a medication order in a single click.

- Click on the icon to the right of the tab 2.
- However, if there is a comment on one of the lines, it will not be modified and the line marked with an orange ball will stay the same.

4.8.3 General comment about the medication order

Lets you add a comment for the entire medication order.

- Click on the icon 3
- Add your comment.

4.9 Care plan tab

The **Care plan** tab provides information about the different care provided to the patient throughout the ICU day. It also displays the various physiological and biological parameters recorded.

In the example below, the **Care plan** tab is split into different specific subtabs:

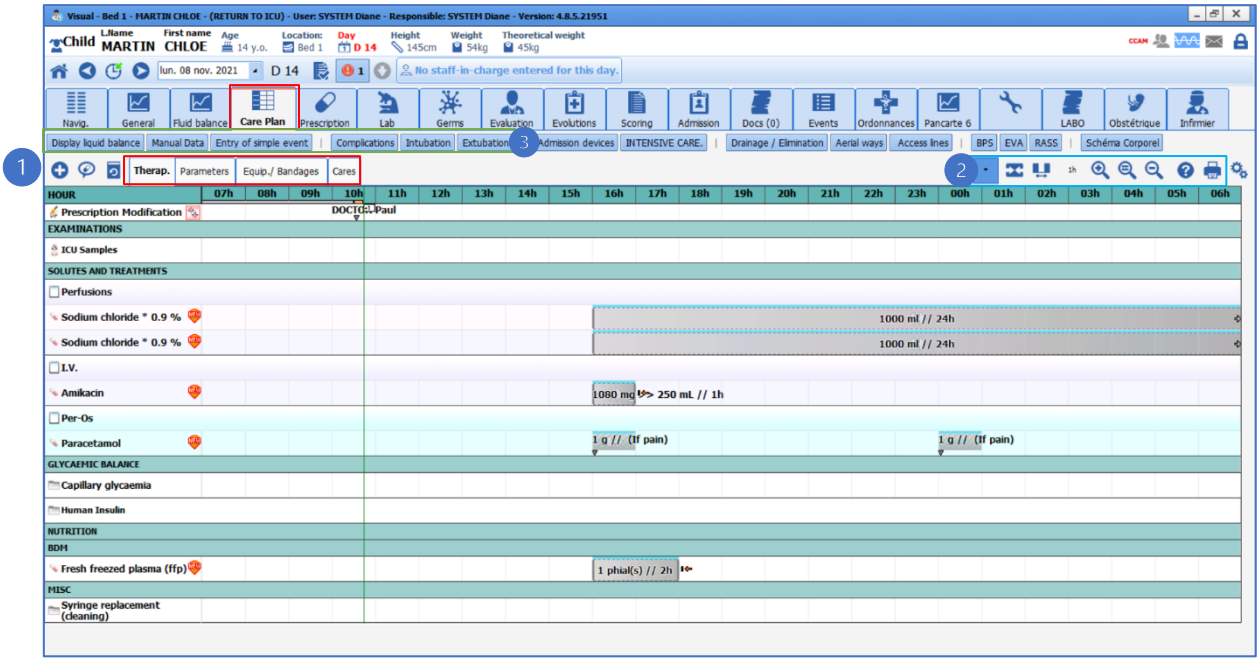
Parameters: this mainly includes the patient's physiological data (entered manually or reported from connected devices) and the reading of the liquid balance outputs.

Treatment: this information comes from the medication order and shows the treatment administered.

Equipment/dressings: this is based on the Body diagram, and is used to track placements / monitoring / removals and associated care.

Care: this lets you track different hygiene and comfort care provided to the patient.

The **Care plan** is by default configured for a 24-hour display corresponding to your ICU day and each column represents 1 hour.



4.9.1 Care plan icons

4.9.1.1 *Icons visible in the headings*

- : Line from a medication order.

: Nurse scheduling line.

: Data entry item line. Lets you enter one-off events.

: Shows that the display lines are merged. By clicking on this icon you can expand the display over several lines.

4.9.1.2 *Icons visible in the menu bar (above the care plan)*

: Displays a menu for you to enter a one-off event at the specified time

: Prescribe verbally

: Displays a record history window to search by type of data and filter by date

: Adjusts the display zoom level

: Changes the tab arrangement

: Centres the display on the marker. In this mode the care plan moves, the marker does not

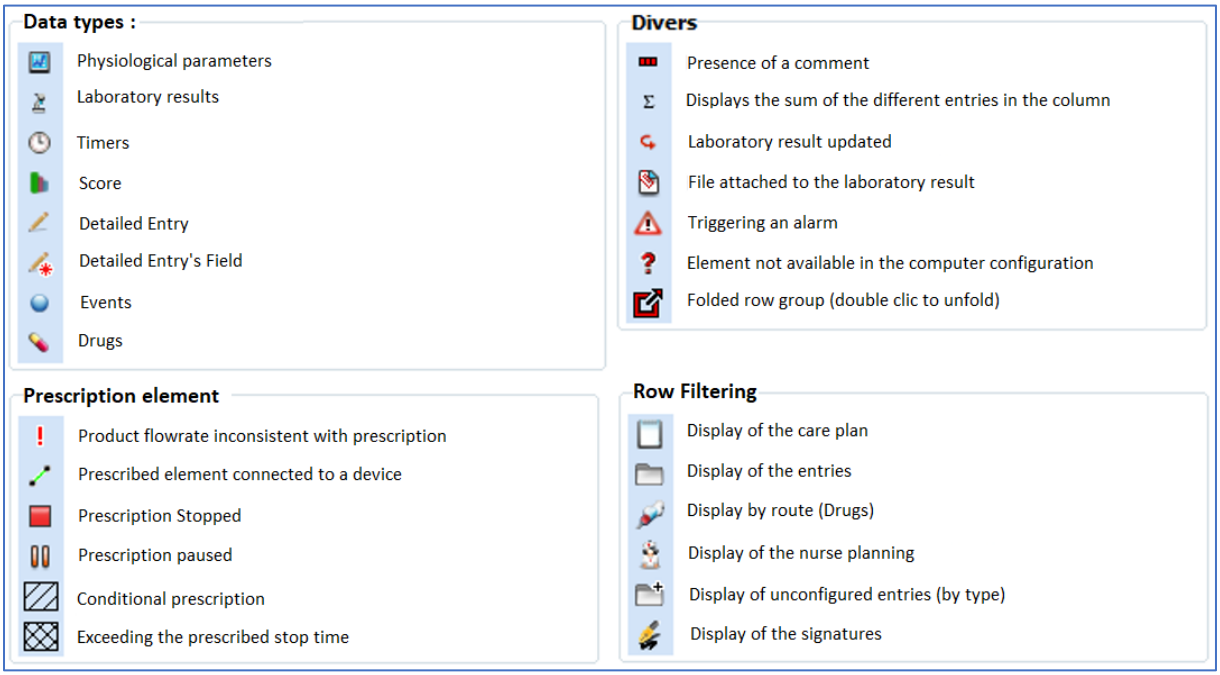
: Displays a custom time slot

: Displays the care plan help tool and explains the colour codes used for occurrences.

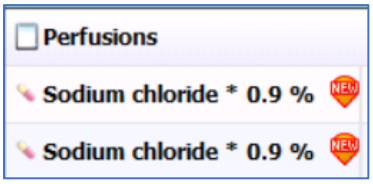
: Used to print the screen

: Opens the care plan configuration window

4.9.1.3 *Other icons also visible in the care plan*



When the medication order has been changed, a "new" label appears on each changed line on the corresponding medication order in the care plan:



When you click on the "new" label, you can see the time at which the medication order was signed.
The length of time the star is displayed can be configured by your key users. By default this is 1 hour.

4.9.2 Using the care plan

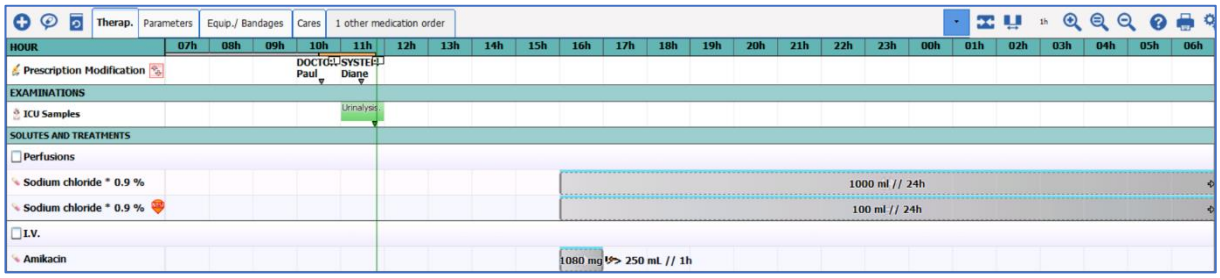
All of the patient's data can be viewed in this tab. You can also enter any new data you wish.

The **Care plan** provides information about all the different care provided to the patient. The data can be entered in different ways depending on the type of line: **From medication order**, **Nurse scheduling** or a **Data entry item**.

4.9.2.1 Data entry items

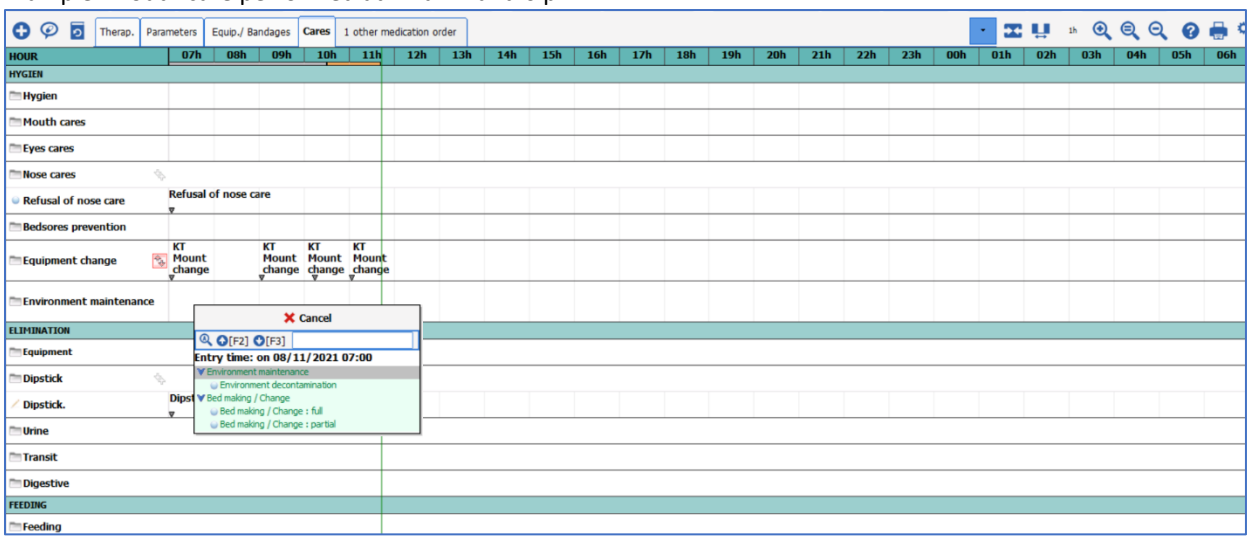
Almost all of the lines in the **Care plan** tab are in this category.

These lines are represented by the icon in the heading



4.9.2.1.1 Adding an item from the Diagrid.

Example: Mouth care performed at 11 a.m. and 6 p.m.



- Double-click on the heading of the corresponding line.
- The menu window offering the available items opens.
- Select the **Mouth care: sticks** item.
- This will be automatically positioned in the current time column (11 a.m. here).
- When you want to enter an identical item at a different time, simply double-click in the corresponding column, here at 6 p.m. The care is entered automatically.

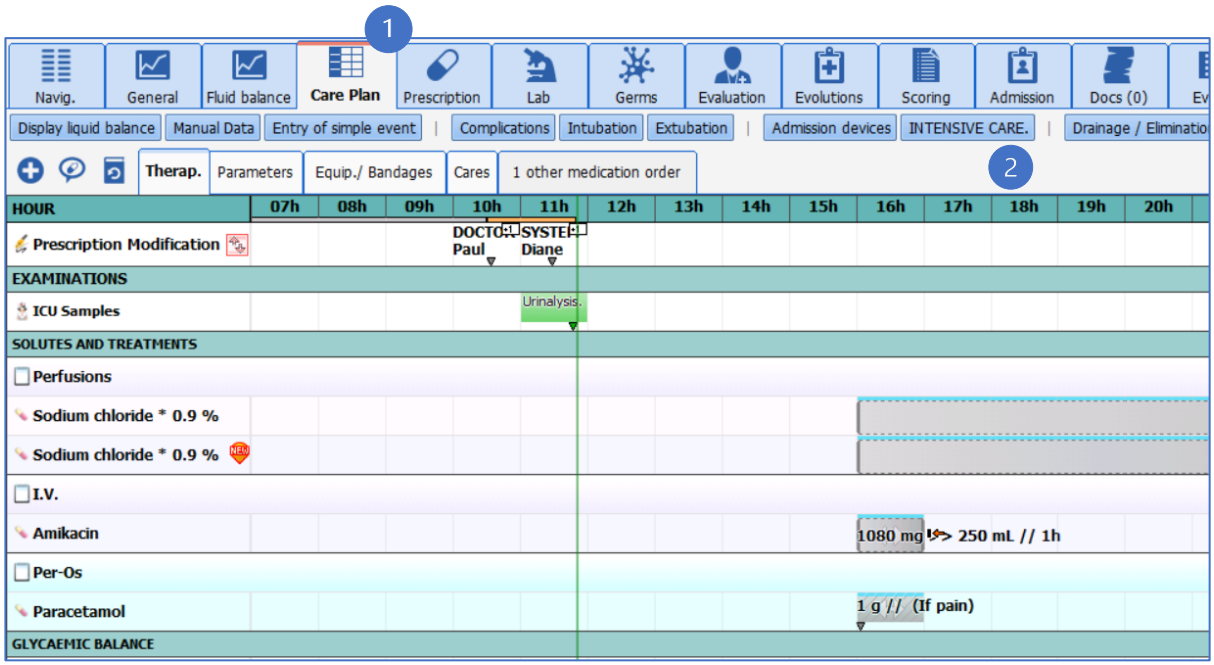
4.9.2.1.2 Adding an item from a 'quick entry' button (2) or from the Make an entry button (1)

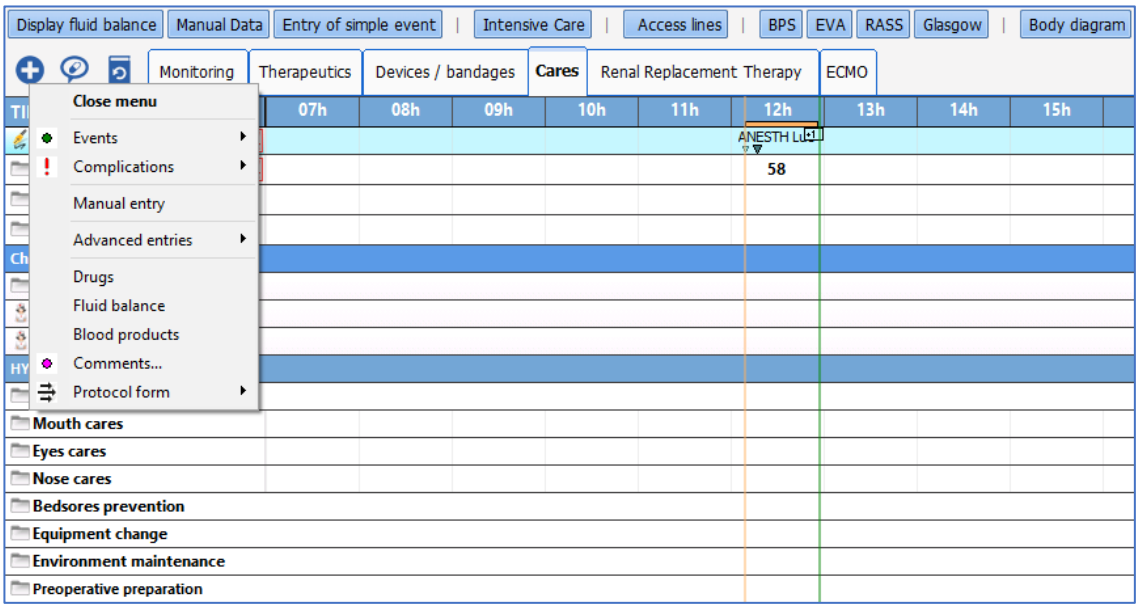
The application offers quick entry buttons to enter data at the current time without necessarily being positioned in the tab displaying the data.

- Click on the **ICU** button (2)
- The menu opens
- Select the item you want
- The action is then entered in the **Care plan** at the current time

Likewise, you can use the **Make an entry** button located at the top left of the **Care plan (1).**

This lets you access all the items available in your unit.

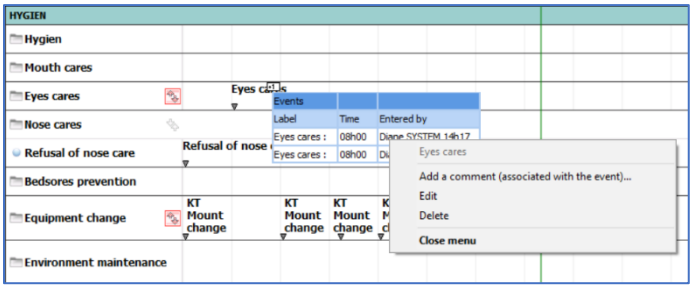




4.9.2.1.3 Add a comment, change or delete an entry item.

You can change an entry made. To do this:

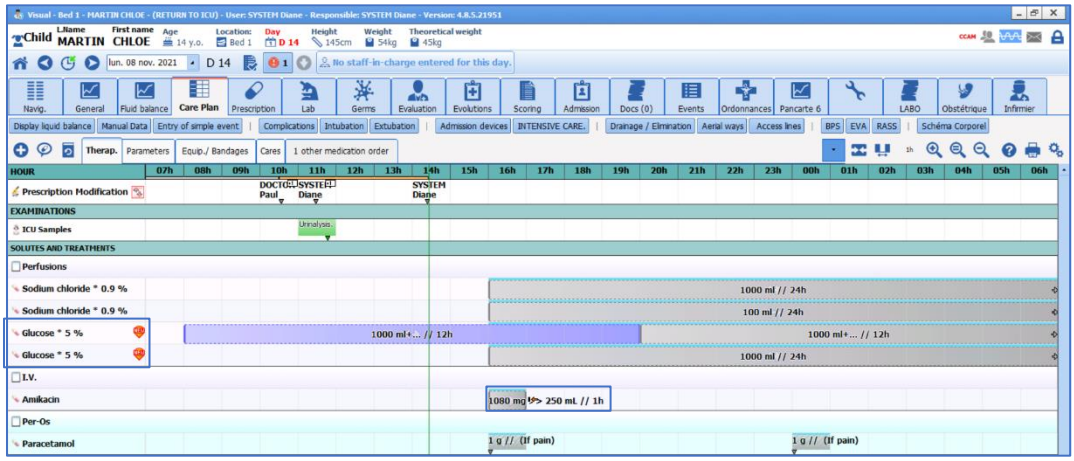
- Click on the entry to change or delete.
- The details window opens.
- Right-click on the details window.
- The options window opens.
- Select the relevant option.



NB: If you want to change the data entry time, just drag and drop the occurrence to the time you want. To delete the occurrence you can also drag it to the heading area.

4.9.2.2 Confirming device placements and removals

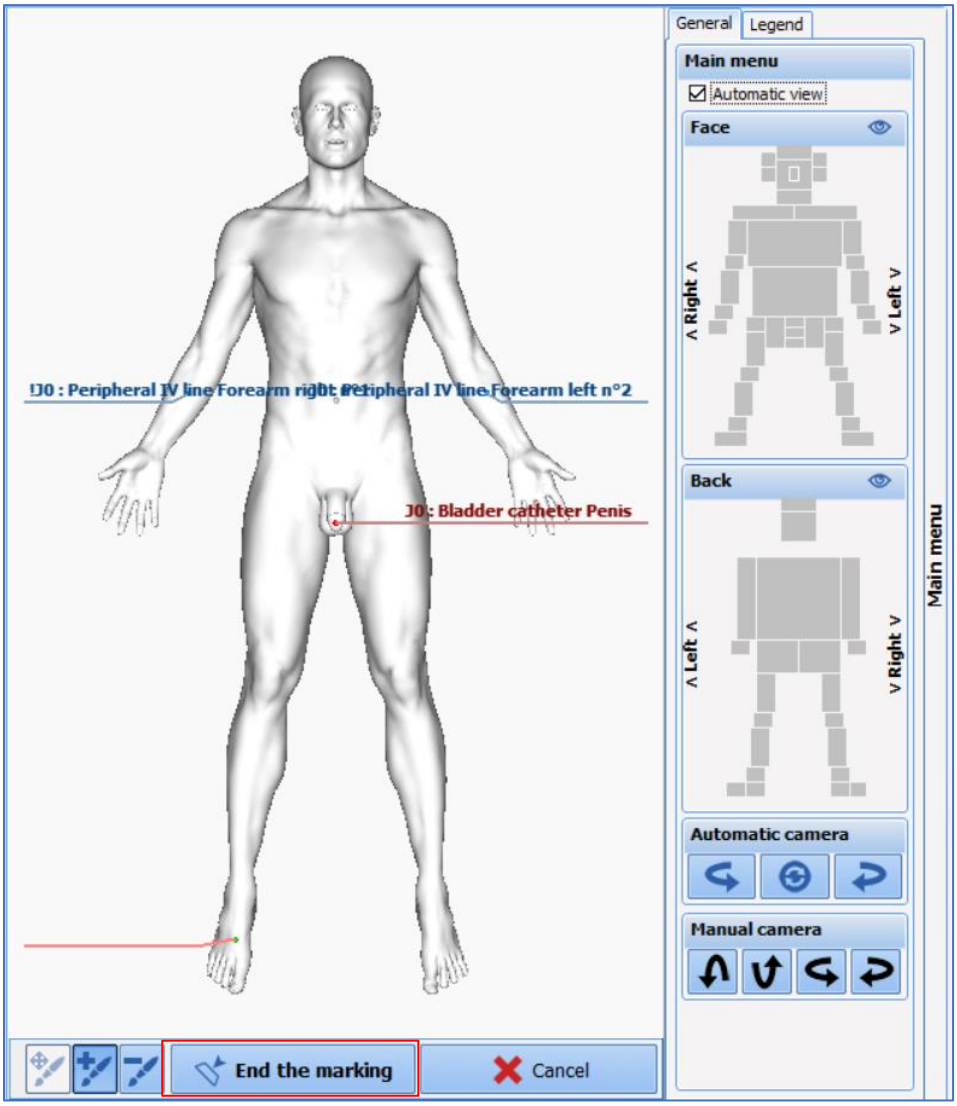
When a device placement or removal is prescribed, this information appears in the care plan like all other medication orders. It is preceded by the icon.



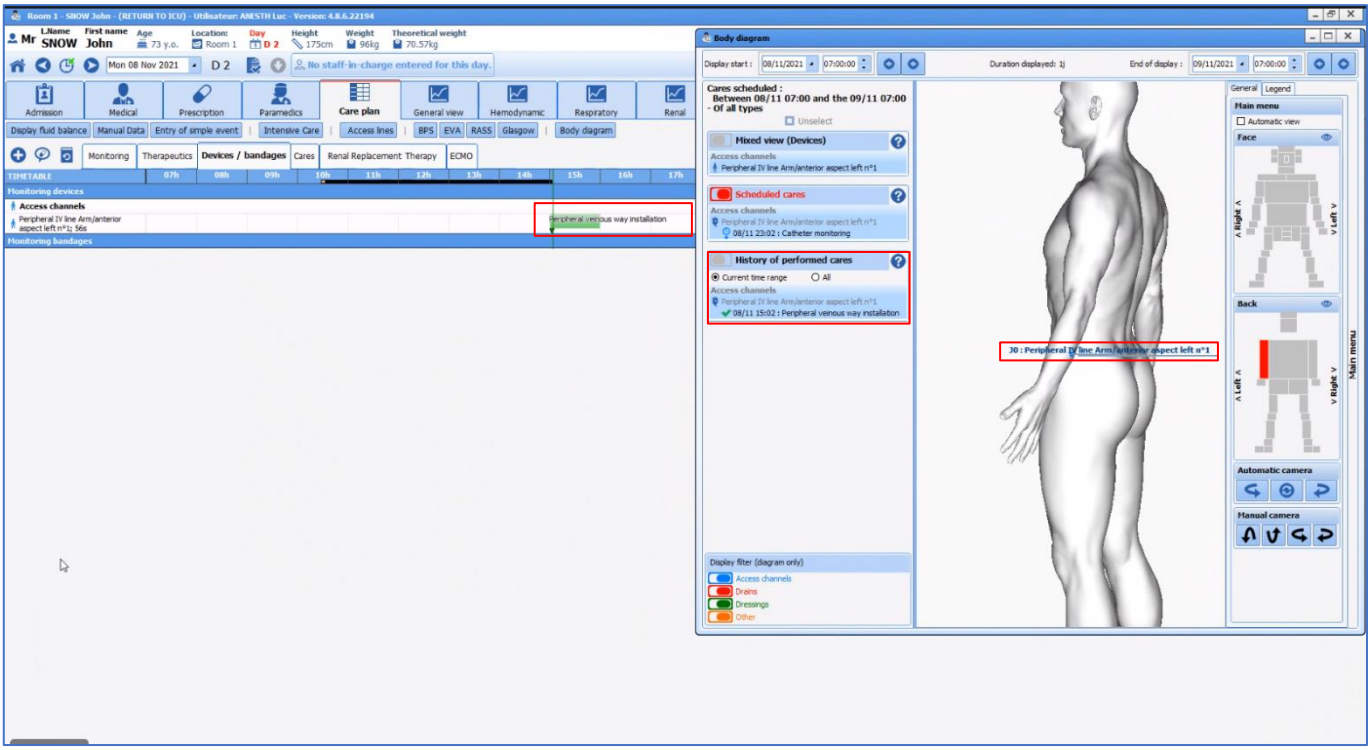
(1) Specific medication order lines to place and remove devices in connection with the related medication order fields.
(2) Occurrence to confirm the action carried out.

These medication orders are only confirmed from the Care plan.

- Mark the occurrence as done by clicking on the first icon.
- When you click, the diagram pop-up window opens to let you show where the device is located.



- Position the device.
- Confirm by clicking on the '**Terminate drawing plot**' button.
- Now enter the device information as seen in the 'Body diagram' chapter.
  If the doctor pre-entered information when issuing the medication order, this information will be available but not editable. The other information can be entered.
- Confirming the initial form indicates that the occurrence is done and updates the Body diagram.



To confirm a Device removal, the procedure is the same.

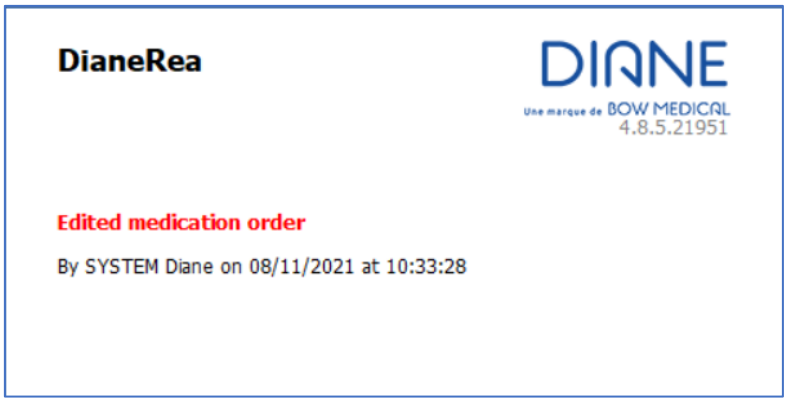
4.9.2.2.1 Items from a medication order

A medication order automatically generates the **Care plan** lines when signed.

These lines are specific and are denoted by the icon in the name headings.
They use the different categories present in the **Medication orders** tab.

4.9.2.2.2 Indicators of changes or new medication orders.

With each new signature, a message is displayed in all the tabs to tell you what actions need to be taken.

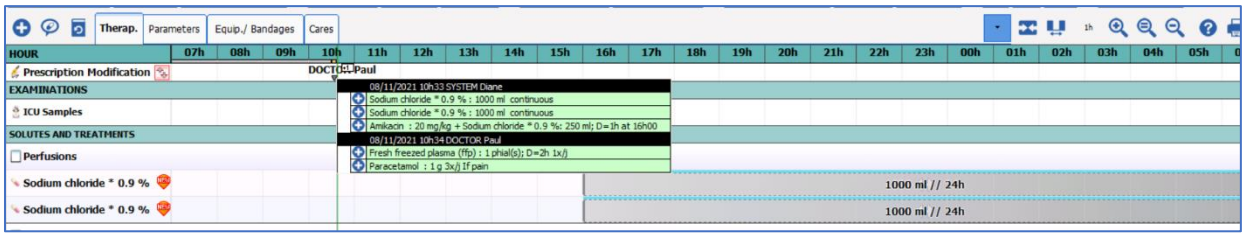


Other indicators show that there are new medication orders or that a particular line has been changed.

- The Star next to the name of the medication order line

Clicking on the “new” label displays the time of the change.

- The **Medication order changes** line at the top of the **Care plan** shows you who signed for the change. When you click you can see a summary of the changes made.



4.9.2.2.2.1 Icons to confirm prescribed occurrences

In the care plan, occurrences are shown according to their duration of administration.
Above each one is a thin light blue line representing the Medication order plan.
This is the medication order as entered by the doctor. Its purpose is to keep the initial medication order.
When the administration is early, late or rescheduled, the two lines are separated.
The confirmation options will differ depending on the type of medication orders involved.

Here are the different icons offered and their meaning.

	Medication orders				
	Label	Status	Start	Prescriber	route
	Enoxaparine sodique : 2000 UI 1x/j		16h00	SYSTEM Diane	SC
	Enoxaparine sodique : 2000 UI 1x/j	To do	16h00	SYSTEM Diane	SC

: show that the occurrence has been done

: show that the occurrence has been done and enter a comment (and change the time of completion)

: show that the occurrence has not been done

: display the details of the medication order (opens the editor)

	Medication orders					
	Label	Status	Start	End	Prescriber	route
	Glucose * 5 % : 1000 ml + Sodium chloride * 10 % : 1000 mg; D=12h continuous	Prescribed : 305,56 drop	16h00	04h00	SYSTEM Diane	IV
	Glucose * 5 % : 1000 ml + Sodium chloride * 10 % : 1000 mg; D=12h continuous	To do	16h00	04h00	SYSTEM Diane	IV

: enter the dilution

: start the infusion

: start the infusion and enter a comment (and change the time of completion).

: used to change the flow rate and/or pause

: lets you start at another flow rate at a specific date/time

	Medication orders						
	Label	Status	Start	Prescriber	Last change by	route	Additional info
	Enoxaparine sodique : 2000 UI 1x/j	Done	15h28	SYSTEM Diane	SYSTEM Diane	SC	0,2 ml - 10000 UI/ml [2000 UI]

: « cancels' the occurrence (returns to **To do** status)

: enter a comment about the completion of the occurrence

	Medication orders							
	Label	Status	Start	End	Prescriber	Last change by	route	Additional info
	Olimel e n7 poche 1l : 1000 ml; D=12h continuous	Started 83,12 mL/h	15h37	03h37	SYSTEM Diane	SYSTEM Diane	IV	83,3 mL/h - 0,044 g/ml (Drip bag 1000) DM : 3,68 g/h [0,05 g]

: stop the infusion

: stop the infusion and enter a comment

: pause the administration

: pause the administration at a scheduled date/time

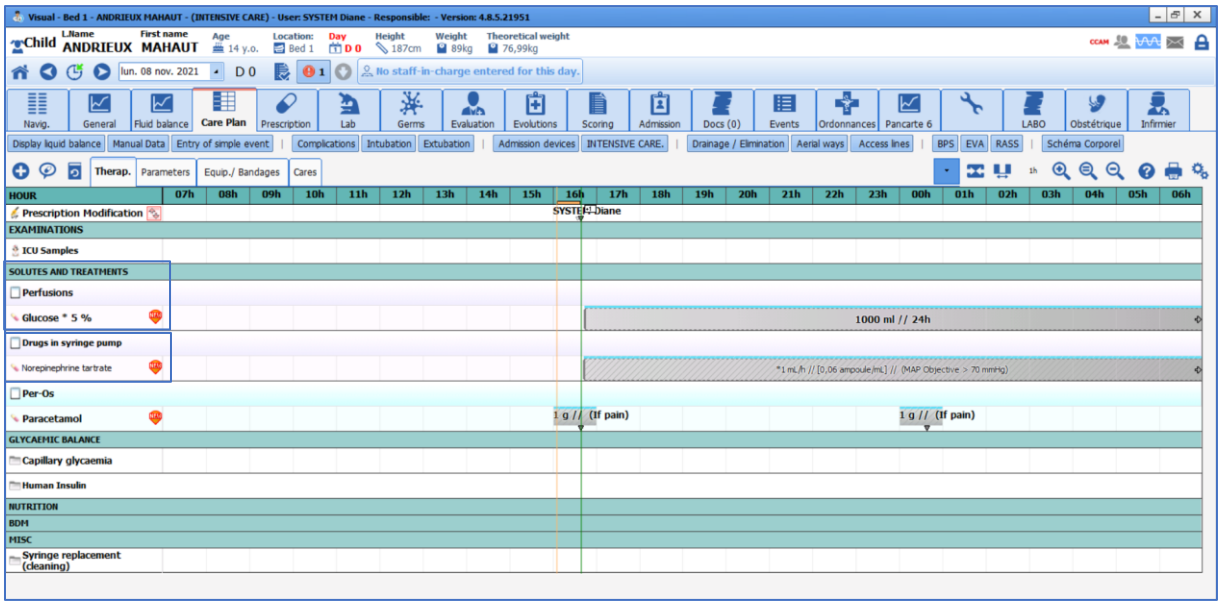
: clean the volumetric container

: clean the volumetric container at a scheduled date/time

	Medication orders					
	Label	Status	Start	Prescriber	route	Condition
	Paracetamol : 1 g 3x/j		16h39	SYSTEM Diane	Oral use	If pain
	Paracetamol : 1 g 3x/j	To do	16h39	SYSTEM Diane	Oral use	If pain

: show that the occurrence has not been done because the condition is not met

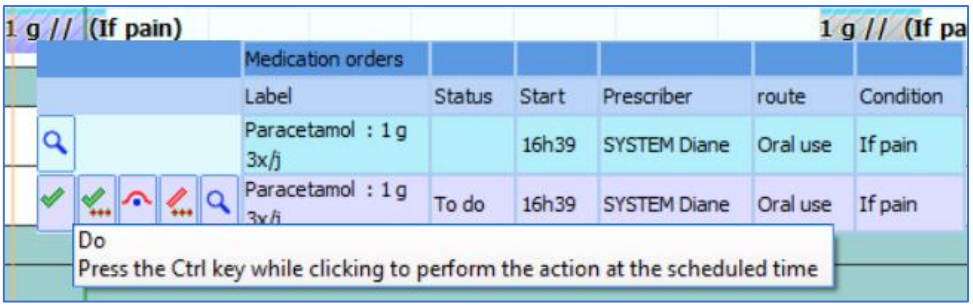
4.9.2.2.3 Examples of confirmation of prescribed items



Reminder:
(1) Icon showing that the line is from a medication order. The name is that of the corresponding medication order field.
(2) Icon showing a pharmaceutical medication order. The name is that of the prescribed product.

4.9.2.2.3.1 Drug prescribed as X per day with a condition

Example: medication order for Paracetamol per os 3 times a day if VAS > 4.



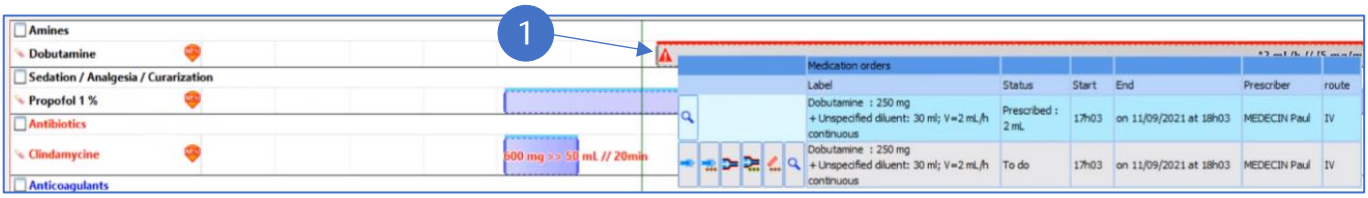
- Click on the first icon: Do: the occurrence will be marked as confirmed at the current time, represented by the green timeline.

- Click on the second icon: Do (changing the date/time or entering additional information.)

Used to enter the actual completion time. Example: administration done at 3 p.m. (scheduled time), but not confirmed in **DIANE**. By clicking on the Scheduled time button (4) the occurrence will be confirmed at 3 p.m. (You can also use the cursor (1) or the clock (2) to indicate the precise time.)
Or you can give additional information, e.g. the actual dose administered (3), here one 500 mg capsule and not two.
Click on the third icon: the condition is not met: used to indicate that the drug has not been administered because the condition (here VAS > 3) is not met.

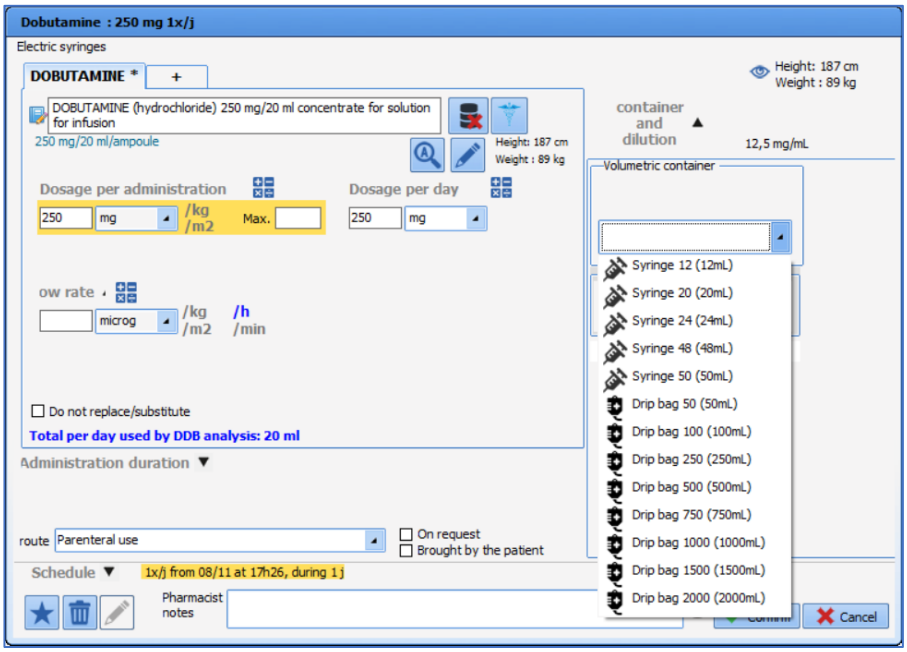
4.9.2.2.3.2 Treatment with a duration of administration

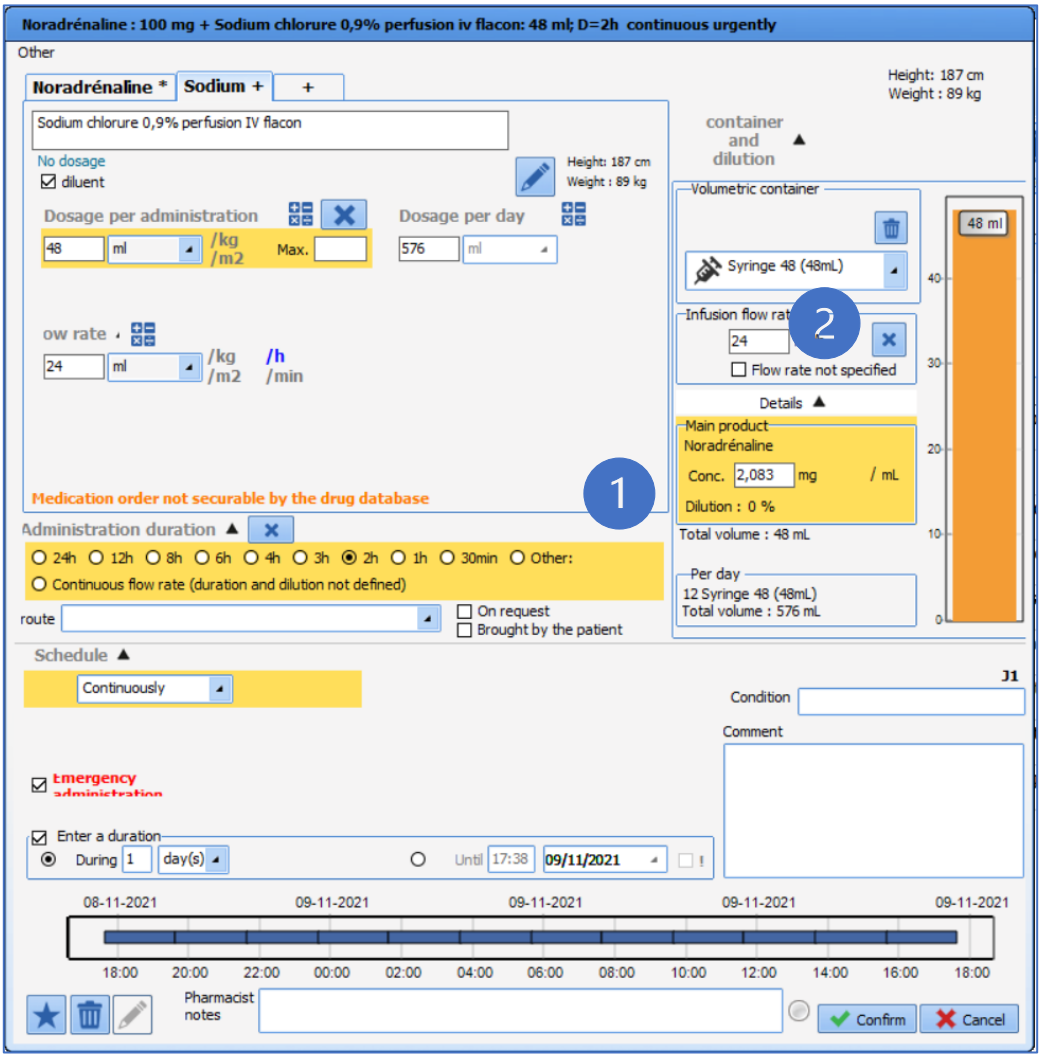
Dobutamine 5 µg/kg/min continuously without specified dilution prescribed in an emergency (1) (indicator of urgency).



To ensure that the occurrences of the Care plan are representative of the speed of administration and the pace of syringe changes, before starting the administration you must enter the container used and therefore the dilution applied.

- Click on the first icon: Dilution information: used to enter the volumetric container used. This automatically calculates the dilution of the product.





- Now click on the second icon: Start: to start the administration.

When necessary, it is also possible to **Change the product concentration** (e.g. need to double the concentration of Noradrenaline to be able to reduce the speed of administration).
To do this,

- Click on the first icon: 'Dilution information'
- Now enter the concentration of the product in box **(1)**.
  If you wish, instead of entering the concentration, you can enter the quantity of main product present in the syringe.
  To do this, click on the double-sided arrow in area **(2)**.
- **)**.

For long (continuous) administrations, you can:

- **Change the flow rate**. Click on the third icon: Change the administration rate now: Enter the desired flow rate in area **(3)** then confirm.

- **Stop current administration**: Click on 'Finish' (first icon)

- **Pause administration**: Click on 'Pause administration' (fifth icon)

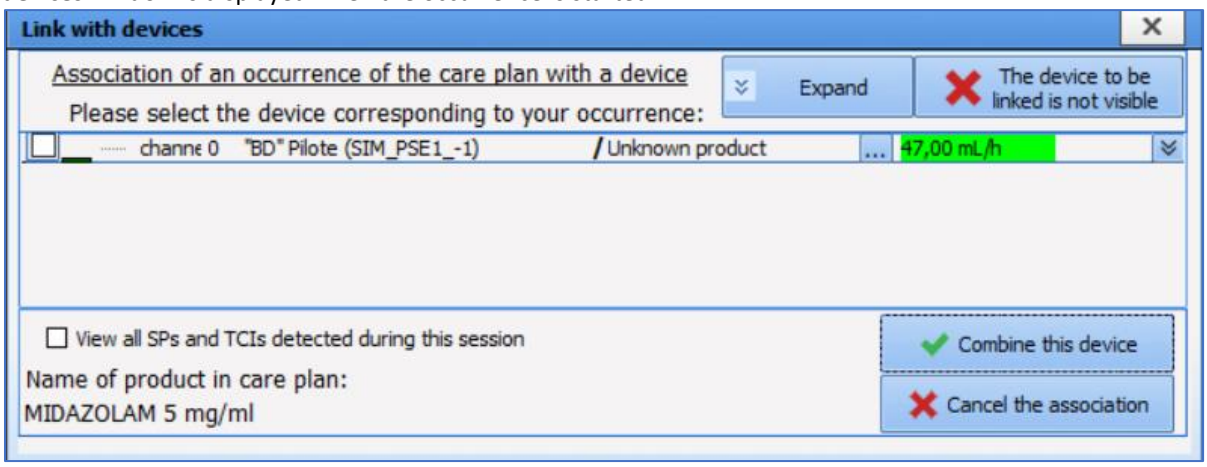
4.9.2.2.3.3 Confirming and scheduling a medication order for an 'undefined time'.

When a medication order is issued for an 'undefined time', you can schedule the administration at the desired time in the Care plan.
The confirmation of the first occurrence will schedule all the other occurrences taking into account the time of administration and the gap required between each administration. Example: Enoxaparin 4000 IU once daily 6 hours after leaving the OT.

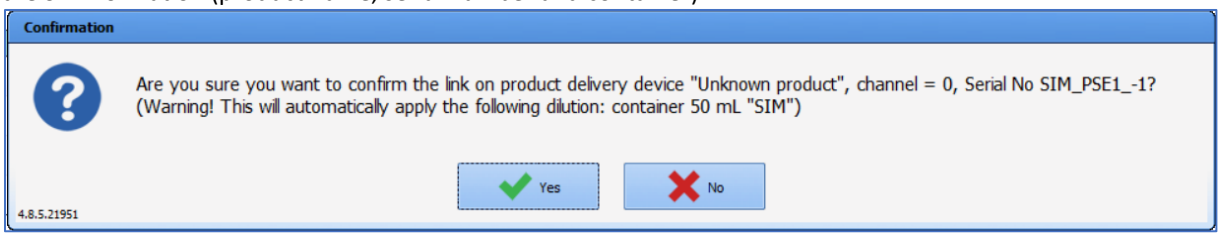
On this type of occurrence, a cell with a white arrow on each side shows that you can move the cell to schedule it. To do this, click on the occurrence, and drag and drop it to the desired time (9 p.m. here).

4.9.2.2.3.4 Association with a syringe pump

Care plan occurrences may be associated with a syringe pump (SP). If one is connected to **DIANE**, the **Link with devices** window is displayed when the occurrence is started.

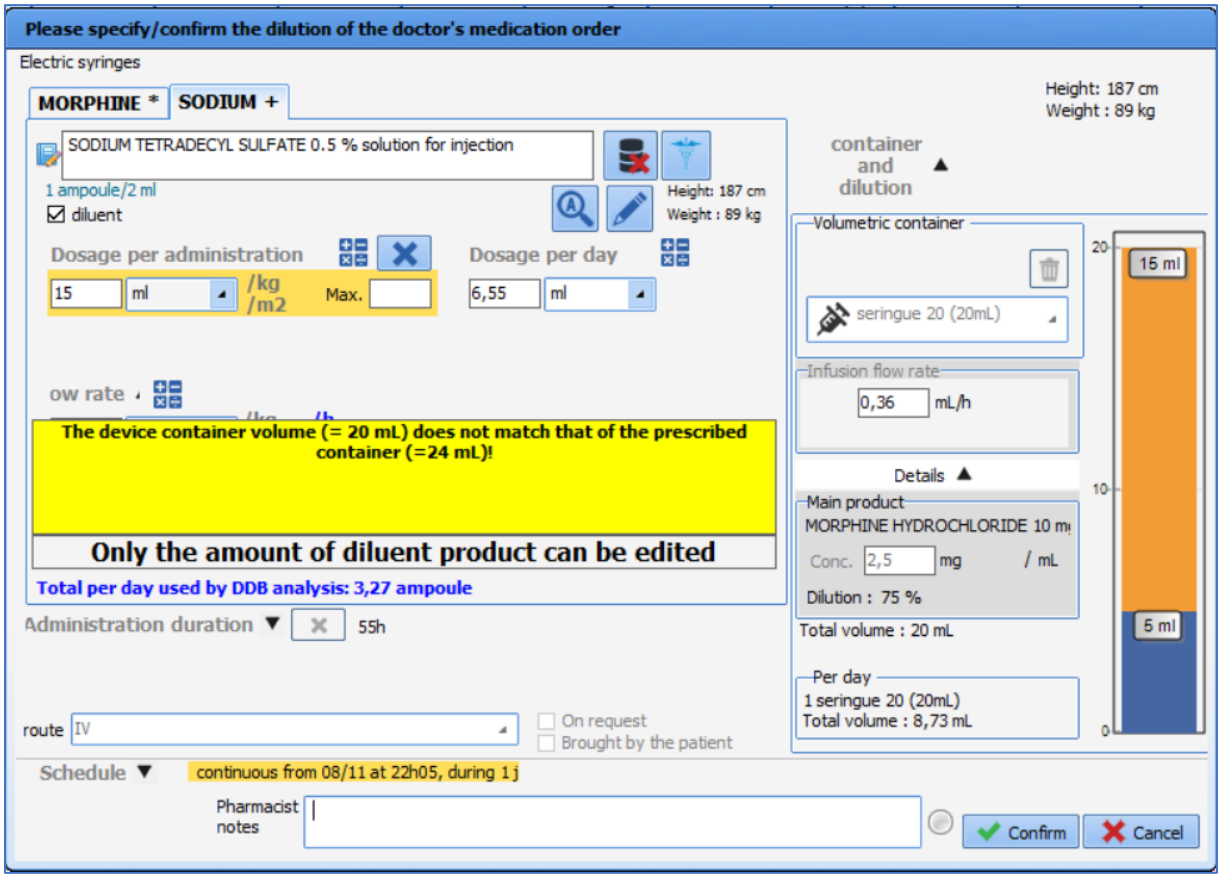


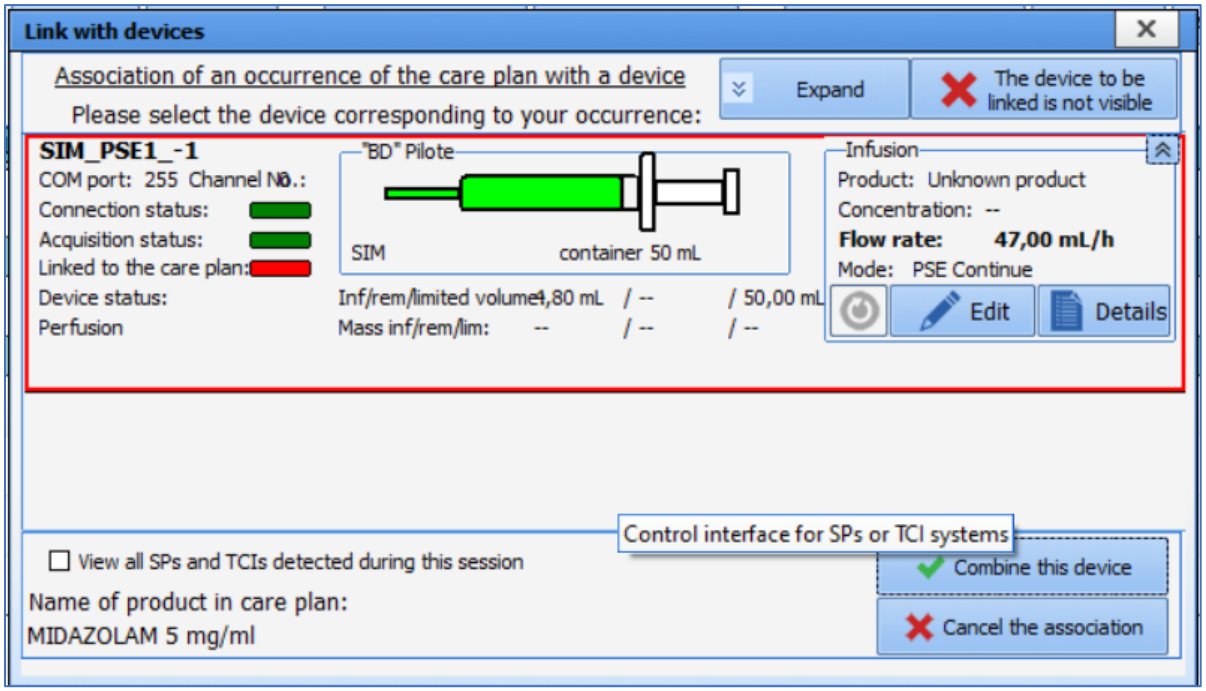
After clicking on the **Confirm these associations** button, a confirmation message appears to allow you to check the SP information (product name, serial number and container).



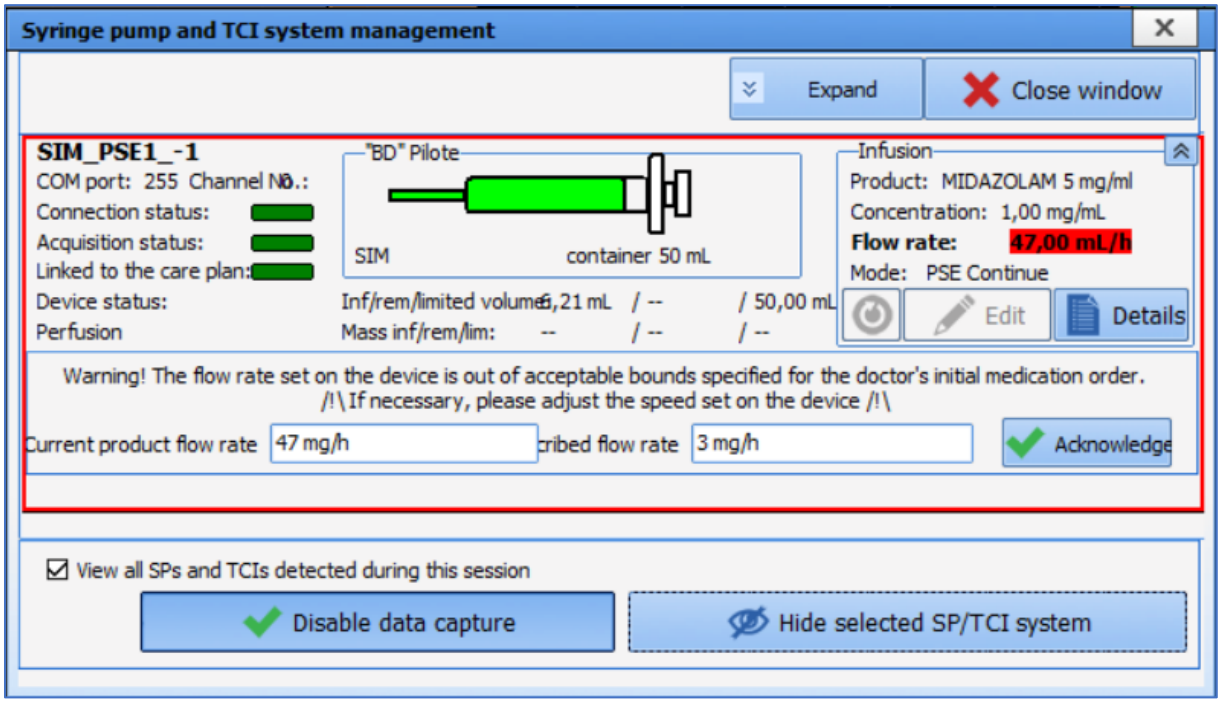
If the dilution was not specified when the medication order was issued, a dilution entry/confirmation form appears so that you can check the final dilution.

When a PS is disconnected, the **PS Management and TCI** window appears in the foreground to indicate that a disconnection has been detected. If the PS is associated with a care plan occurrence,





Once the connection is re-established, the product name, concentration and syringe volume can be retrieved by clicking on the **Retrieve this information for the current infusion** button.



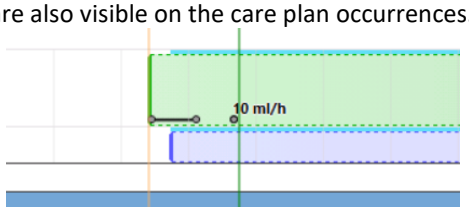
The link between the occurrence and the SP can be restored by clicking on the **Restore the link and add the volume**.

Any volume that is infused during the disconnection can be reinserted in **DIANE** by creating a manual record and entering the start and end time and date of the occurrence, the quantity of product, the infused volume and the calculated average flow rate.

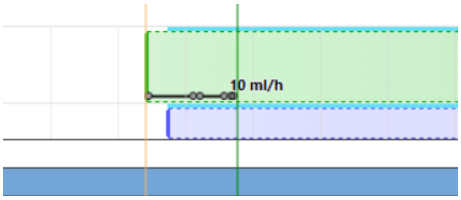
Records of this type are found in the **Events** tab.

Drug	route	Serial num...	Dosage	Unit	Concen	C. unit	Occurrence ti...	End T.	Entry T.	Total	T. Unit	Fl. bal.	Entered by	Comment
MORPHINE HYDROC...	Parenteral...	Syringe 50	10	ml	1		08/11 22:16:00		22:16:00	10	ml	+10 mL	Diane SYSTEM	
GLUCOSE 5 % + PO...	Parenteral...	Syringe 50	40	ml	1		08/11 22:16:00		22:16:00	40	ml	+40 mL	Diane SYSTEM	
MIDAZOLAM 5 mg/ml	PSE Conti...	SIM_PSE1...	47	mL/h	1	mg/mL	08/11 22:11:54	in progress	22:11:54	8,279	mg	+8,279 mL	Diane SYSTEM	
OLIMEL E N7 POCHE...	IV	Drip bag 1...	75	mL/h	0,044	g/ml	08/11 15:53:00	16:04:30	15:55:10	0,635	g	+14,375 mL	Diane SYSTEM	
OLIMEL E N7 POCHE...	IV	Drip bag 1...	83,333	mL/h	0,044	g/ml	08/11 15:37:00	15:53:00	15:37:00	0,981	g	+22,222 mL	Diane SYSTEM	

They are also visible on the care plan occurrences.



Volume not reinserted.



Volume reinserted.

A manual record can be added to the care plan by clicking on the button.

The **Add a manual record to a PS-related occurrence** window appears. The list of the various records associated with the occurrence is visible.

Records retrieved by the SP are not editable. Only automatic volume reinsertion and other such manual records can be edited or deleted.

If the start and end time and date of the record overlap with other records, a warning message will appear.

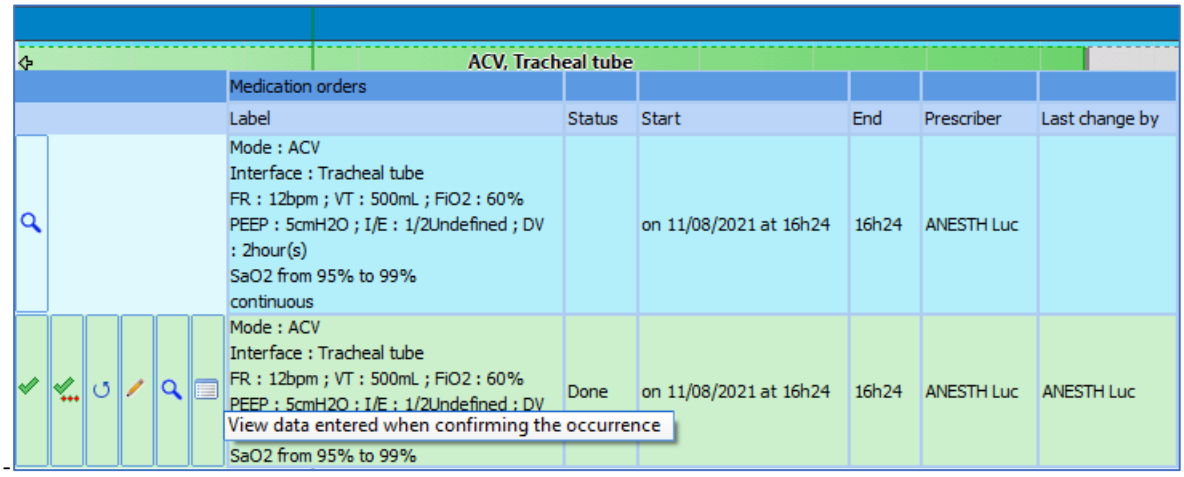
If, when the SP is reconnected, the infusion currently occurring on the device seems to correspond to a started occurrence (e.g. a user tries to associate the SP with a care plan occurrence different from the initial occurrence), **DIANE ICU** will ask you if you want to restore the link with the initial occurrence. Click on the **Same infusion** button if the answer is yes. However, if the infusion is actually a new one (different line in the care plan), click on the **New infusion** button to start a new occurrence.

If a change is made to the medication order (flow rate to be changed immediately), **DIANE ICU** will ask you if you want to restore the link. If the answer is yes, click on the **Scheduled occurrence**. This will start a new occurrence with the new flow rate prescribed following the initial occurrence. However, if the infusion is a new one (different line in the care plan), click on the **New occurrence** button to start a new occurrence.

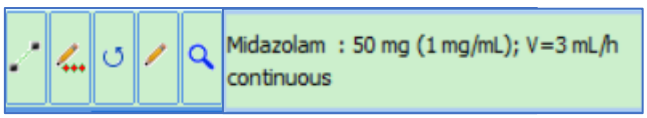
4.9.2.2.3.5 Special case of ventilation parameters

The ventilation parameters confirmation window lets you enter the patient's machine parameters without changing the medication order.

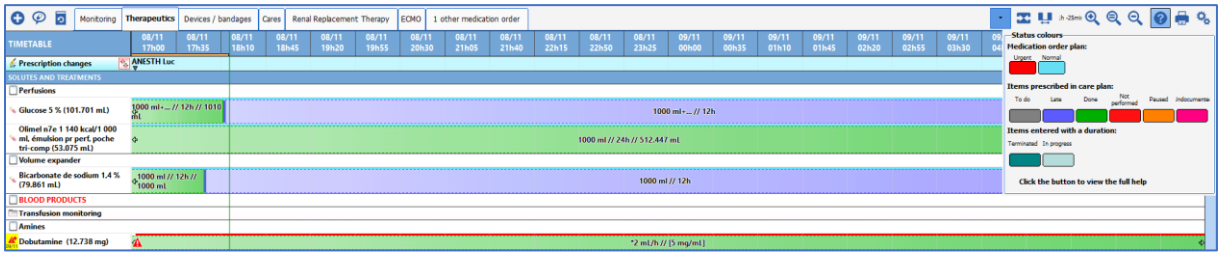
Click on the Do icon: this opens the confirmation window showing the information in the medication order. From this window, you can directly enter the patient's monitoring information and the patient's machine data. Clicking on the last icon displays the content entered at confirmation.



When you confirm the occurrences in the Care plan, their background colour changes, showing the new status.

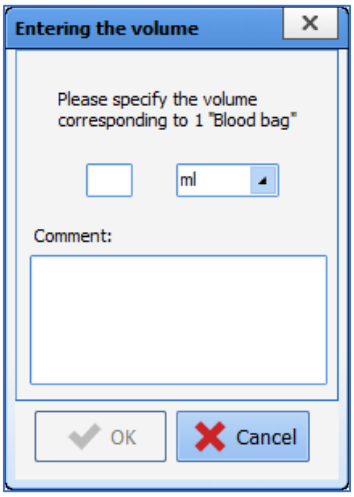


The colour code is accessible by hovering the mouse over the at the top right of the Care plan.



4.9.2.2.3.6 Special case of products delivered in blood bags or drip bags

If a blood bag is prescribed (in the **Medication order** tab), the associated volume will also be requested when the occurrence is performed in the care plan.



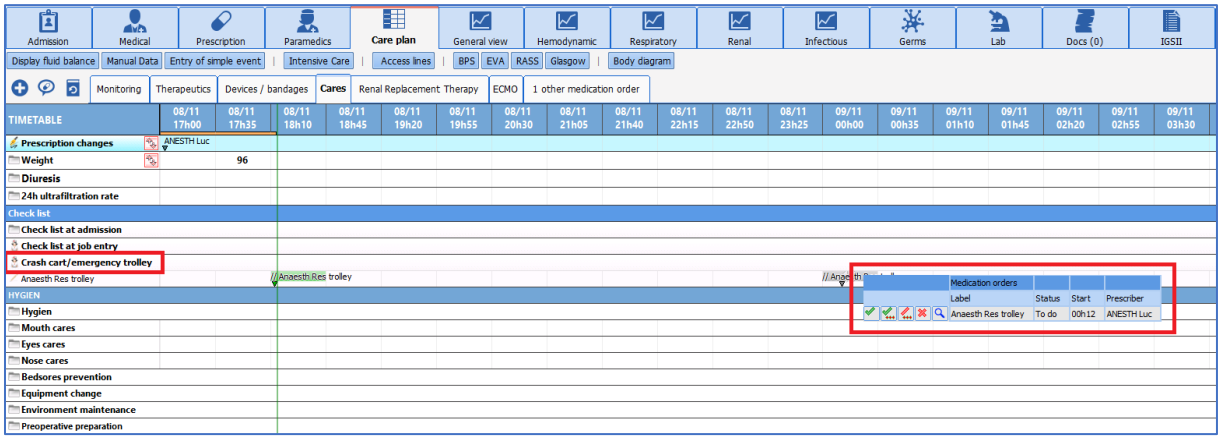
Enter the information about the blood bag in the **Comment** field.
The comment will appear in the **Additional Information** field when the occurrence is clicked on.

	Medication orders				
	Label	Status	Start	Prescriber	Last change by
	Erythrocyte concentrate (cgr) : 3 Blood bag 1x/j		15h00	SYSTEM Diane	
	Erythrocyte concentrate (cgr) : 3 Blood bag 1x/j	Done	15h00	SYSTEM Diane	SYSTEM Diane

4.9.3 Nurse scheduling

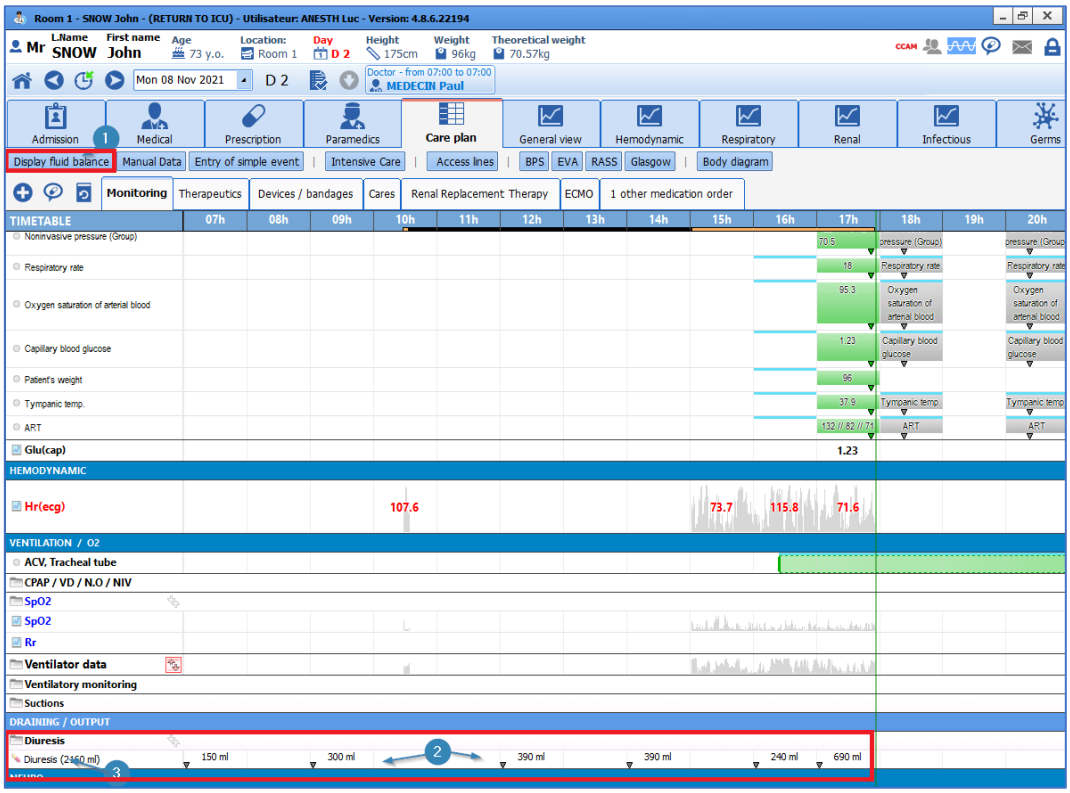
The application also lets you enter 'Scheduling' type information to schedule a series of care.

These items are shown in the care plan by the icon in the heading column.
These items are confirmed using the same procedure as for confirming the items from a medication order.



4.9.4 Fluid balance

The application makes it easy to calculate the total intake/output.
'**Intake**' is calculated from the administrations entered from the Care plan (including the quantities entered for product dilutions, which is why it is important to enter them before commencing administration.)
'**Outputs**' are derived from the quantifications from the Care plan.



(1) Button displaying the Fluid balance.
(2) Display of the quantity entered during the reading.
(3) Daily total of the same output: this total is calculated over the display day, here from 7 a.m. to 6:59 a.m.

4.9.4.1 Quantification of 'Outputs' in the absence of the body diagram

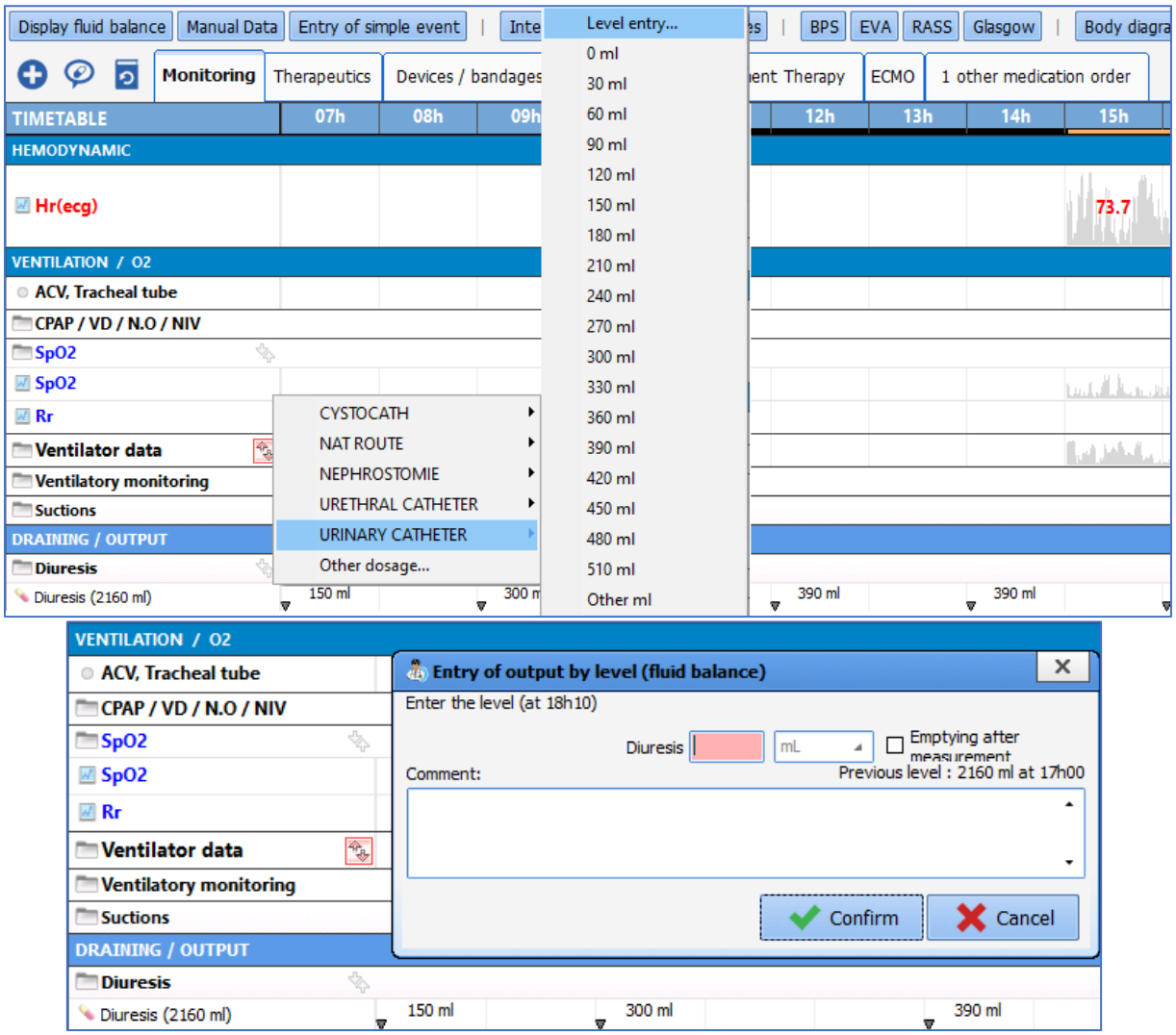
There are two ways to quantify 'Outputs':

- **Using the level**: during your reading, simply enter the total quantity in the container.

_ Double-click on the desired item in the heading column (Other drain here).
_ Select the 'Enter using level' option at the top of the list.
The pop-up window opens to enter the quantity.
_ Confirm.

The daily total is then displayed in the heading column, and the difference between the previous entry and the entry made is displayed in the cell of the current time slot.

N.B.: as long as no reset is carried out, the 'Previous level' **(3)** displayed in the pop-up window will show the total since the first entry.



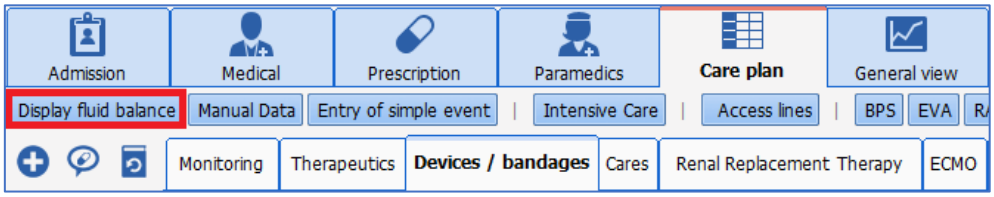
(1) Box to enter the quantity in mL.
(2) Reset: checking this box lets you start quantification again from zero (when you change the container or empty it).
(3) Previous level indicator.

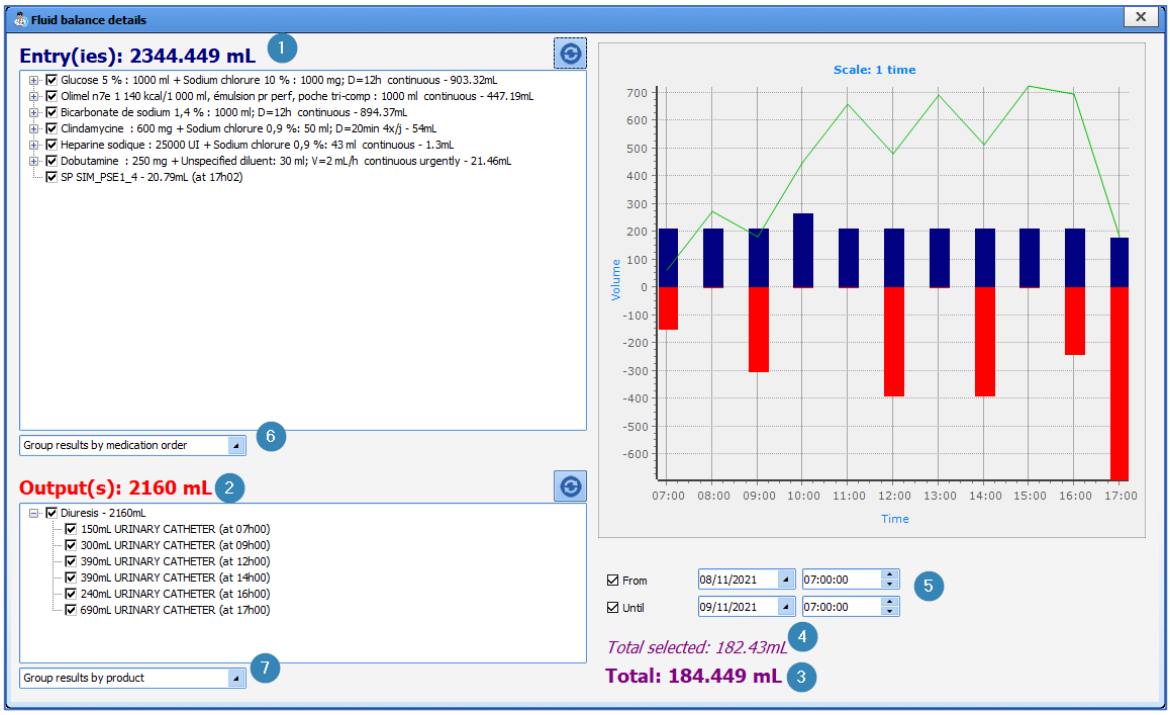
- **Using the volume**:

This method lets you enter the difference between the previous reading and the current reading.
_ Double-click on the desired item in the heading column (Other drain here).
_ Select the desired quantity from the menu.
_ The entry is automatically displayed in the current time slot.

4.9.4.2 *Viewing the overall Fluid balance:*

The patient's overall input/output report is displayed using a shortcut button under the tabs.





(1) Calculation of total intake: the detail of each input is shown underneath.
(2) Total outputs: the detail is shown underneath.
(3) Total: calculation of a patient's total fluid intake and output (all intakes and outputs).
(4) Selected total: calculation of a patient's total fluid intake and output (selected intakes and outputs only).
(5) Used to select a customizable time slot. By default, this field shows the previous ICU day.
(6) Check box for pooling intakes:
- By product
- By medication order
- By care item

(7) Check box for pooling outputs:
- By product (or route)
- By medication order
- By care item

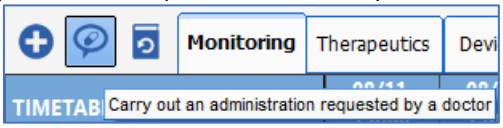
4.9.5 Care plan history

The Care plan history button lets you quickly view, group and analyze the data entered and collected in the Care plan.
Its search functions let you rapidly retrieve data in the record.
The 'Mixed view' function lets you analyze the data.
The data is presented in a table that can be printed or exported as a spreadsheet or in PDF format.

(1) '**History**' button.
(2) Record '**History**' pop-up window.
(3) Subtabs giving access to the different types of data available.
(4) Expandable area giving access to advanced curve processing functions.
(5) Area to select a customizable time slot.
(6) Text search box.
(7) Area to select available items.
(8) Export and print button.

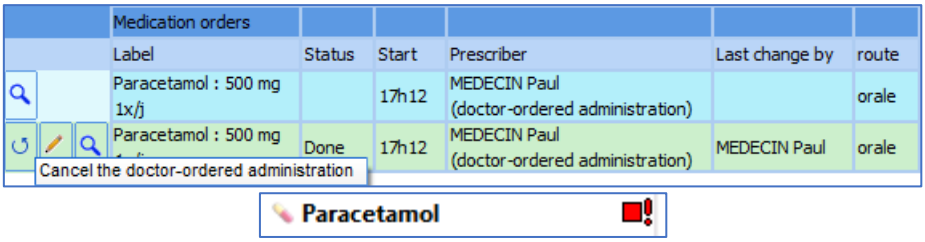
4.9.6 Case of doctor-ordered administration

In the **Care plan** tab, **DIANE** lets you administer products ordered by a doctor.

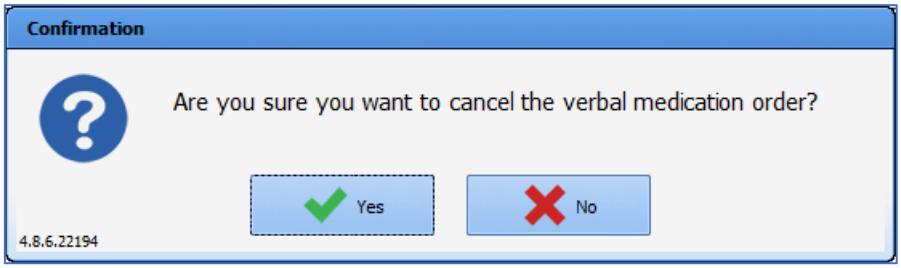


The entry appears in the care plan with a special icon.

Provided it has not been confirmed by a doctor, an erroneous entry can be cancelled by clicking on it to display a menu.

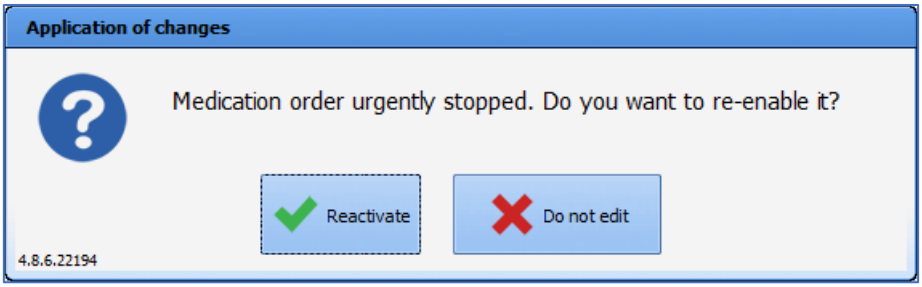


If the user cancelling the entry is different from the user who entered it, a confirmation message is displayed.

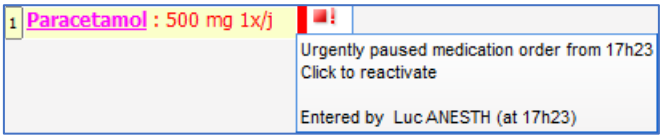


In the **Medication order** tab, the medication order appears in light pink with an urgent stop icon.

Doctors can confirm a medication order by opening it. A message confirming that the medication order has been urgently stopped appears.

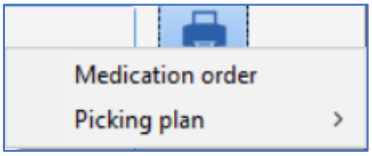


The medication order can also be re-enabled.

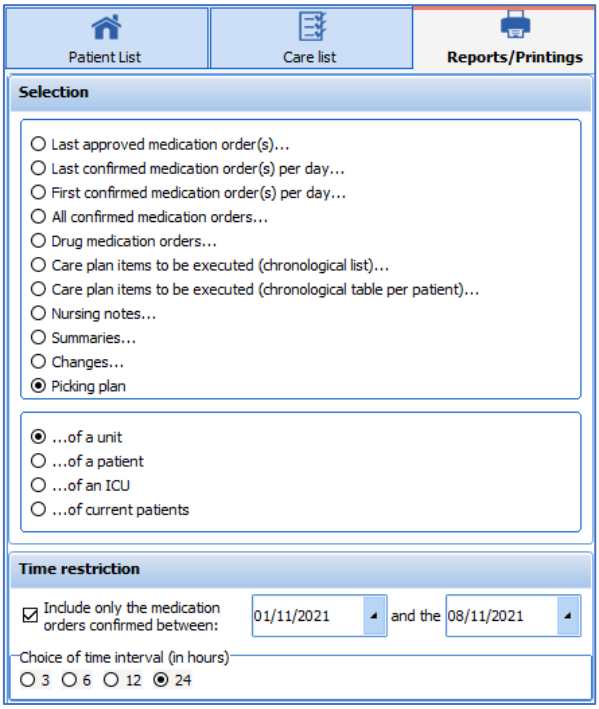


4.10 Picking plan

The picking plan can be printed from the **Medication order** tab.

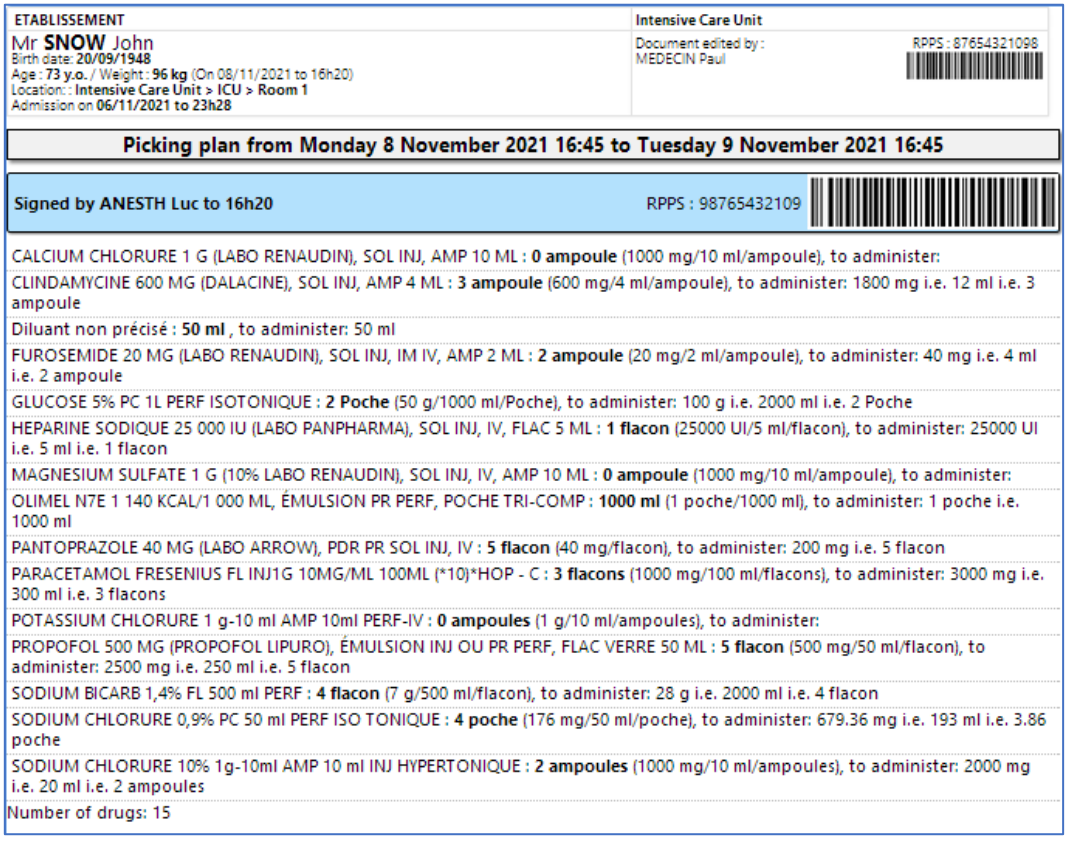


The picking plan can also be printed from the **Reports/Printouts** tab of the ICU portal.



The picking plan can be printed for four different time ranges.

Only products that have a dosage and are scheduled to start within the time interval (3, 6, 12 or 24 hours) starting from the current time are taken into account.



ETABLISSEMENT — **Intensive Care Unit**

Mr **SNOW** John
Birth date: **20/09/1948**
Age : **73 y.o.** / Weight : **96 kg** (On 08/11/2021 to 16h20)
Location: : **Intensive Care Unit > ICU > Room 1**
Admission on **06/11/2021 to 23h28**

Document edited by :
MEDECIN Paul

RPPS : 87654321098

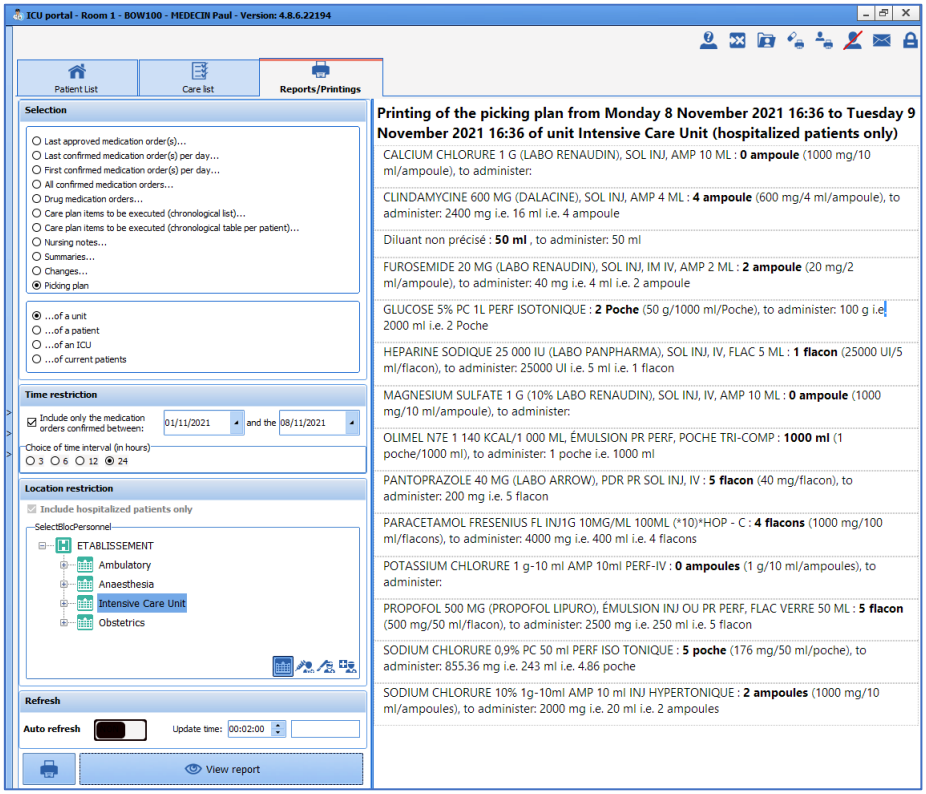
Picking plan from Monday 8 November 2021 16:45 to Tuesday 9 November 2021 16:45

Signed by ANESTH Luc to 16h20 RPPS : 98765432109

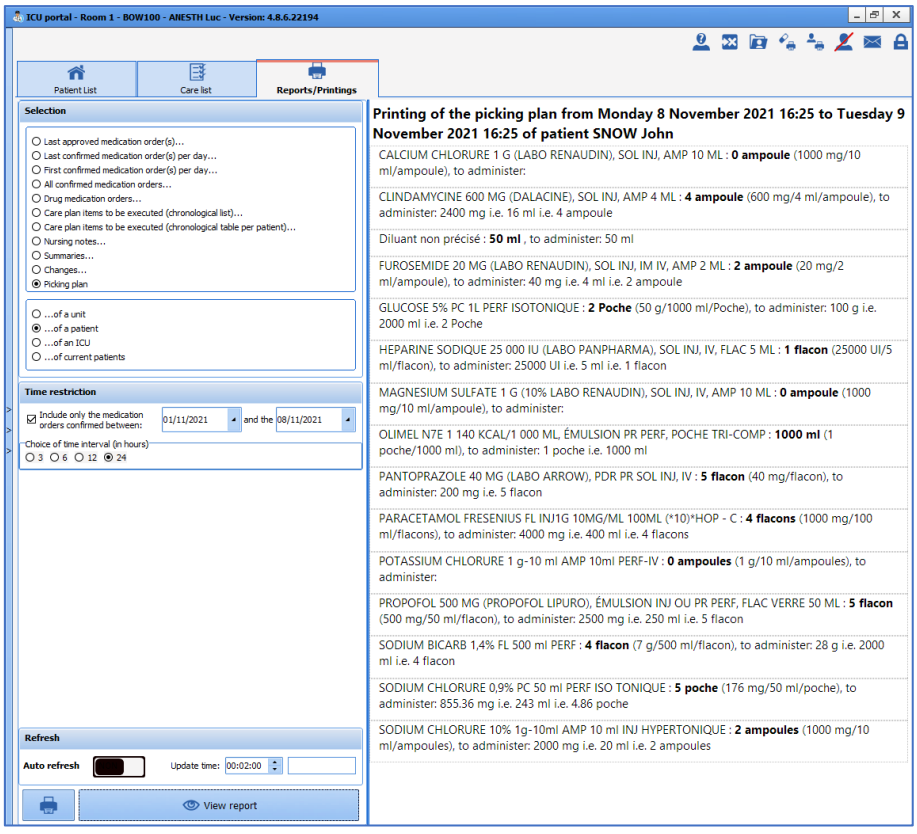
CALCIUM CHLORURE 1 G (LABO RENAUDIN), SOL INJ, AMP 10 ML : **0 ampoule** (1000 mg/10 ml/ampoule), to administer:
CLINDAMYCINE 600 MG (DALACINE), SOL INJ, AMP 4 ML : **3 ampoule** (600 mg/4 ml/ampoule), to administer: 1800 mg i.e. 12 ml i.e. 3 ampoule
Diluant non précisé : **50 ml** , to administer: 50 ml
FUROSEMIDE 20 MG (LABO RENAUDIN), SOL INJ, IM IV, AMP 2 ML : **2 ampoule** (20 mg/2 ml/ampoule), to administer: 40 mg i.e. 4 ml i.e. 2 ampoule
GLUCOSE 5% PC 1L PERF ISOTONIQUE : **2 Poche** (50 g/1000 ml/Poche), to administer: 100 g i.e. 2000 ml i.e. 2 Poche
HEPARINE SODIQUE 25 000 IU (LABO PANPHARMA), SOL INJ, IV, FLAC 5 ML : **1 flacon** (25000 UI/5 ml/flacon), to administer: 25000 UI i.e. 5 ml i.e. 1 flacon
MAGNESIUM SULFATE 1 G (10% LABO RENAUDIN), SOL INJ, IV, AMP 10 ML : **0 ampoule** (1000 mg/10 ml/ampoule), to administer:
OLIMEL N7E 1 140 KCAL/1 000 ML, ÉMULSION PR PERF, POCHE TRI-COMP : **1000 ml** (1 poche/1000 ml), to administer: 1 poche i.e. 1000 ml
PANTOPRAZOLE 40 MG (LABO ARROW), PDR PR SOL INJ, IV : **5 flacon** (40 mg/flacon), to administer: 200 mg i.e. 5 flacon
PARACETAMOL FRESENIUS FL INJ1G 10MG/ML 100ML (*10)*HOP - C : **3 flacons** (1000 mg/100 ml/flacons), to administer: 3000 mg i.e. 300 ml i.e. 3 flacons
POTASSIUM CHLORURE 1 g-10 ml AMP 10ml PERF-IV : **0 ampoules** (1 g/10 ml/ampoules), to administer:
PROPOFOL 500 MG (PROPOFOL LIPURO), ÉMULSION INJ OU PR PERF, FLAC VERRE 50 ML : **5 flacon** (500 mg/50 ml/flacon), to administer: 2500 mg i.e. 250 ml i.e. 5 flacon
SODIUM BICARB 1,4% FL 500 ml PERF : **4 flacon** (7 g/500 ml/flacon), to administer: 28 g i.e. 2000 ml i.e. 4 flacon
SODIUM CHLORURE 0,9% PC 50 ml PERF ISO TONIQUE : **4 poche** (176 mg/50 ml/poche), to administer: 679.36 mg i.e. 193 ml i.e. 3.86 poche
SODIUM CHLORURE 10% 1g-10ml AMP 10 ml INJ HYPERTONIQUE : **2 ampoules** (1000 mg/10 ml/ampoules), to administer: 2000 mg i.e. 20 ml i.e. 2 ampoules
Number of drugs: 15

In the **Reports/Printouts** tab of the ICU portal, you can print the picking plan for:

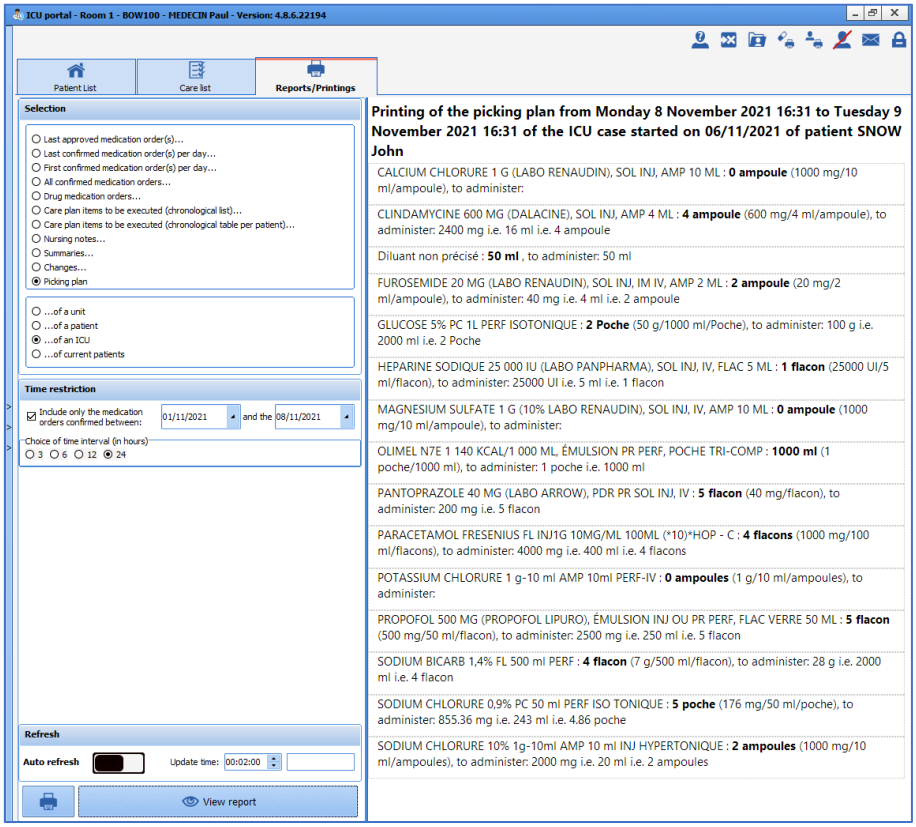
- a unit



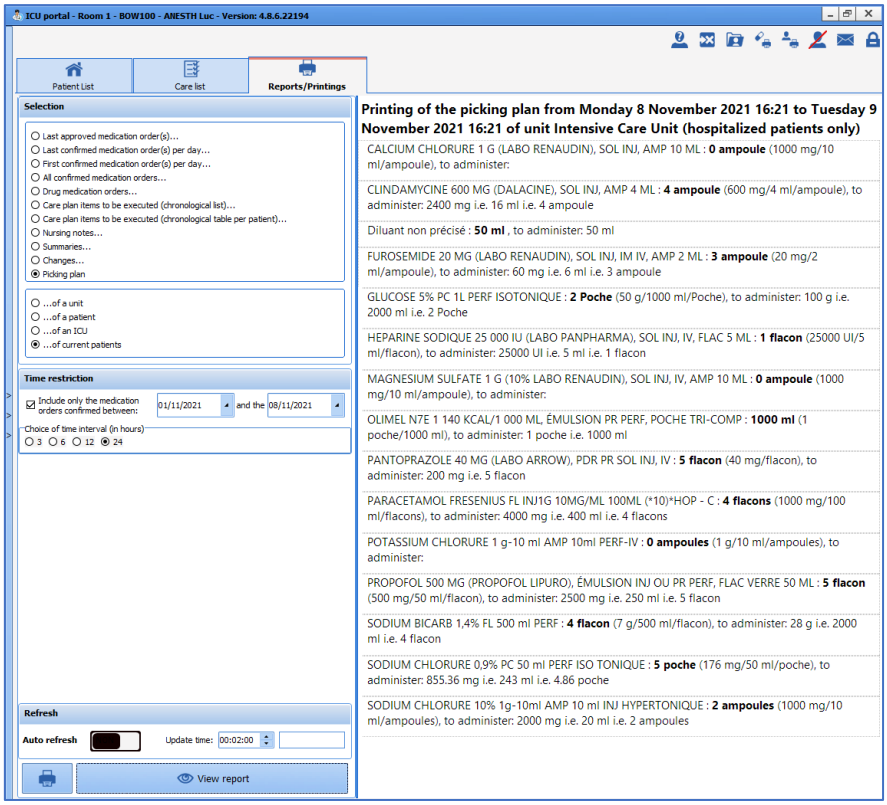
- a patient



- a patient in intensive care



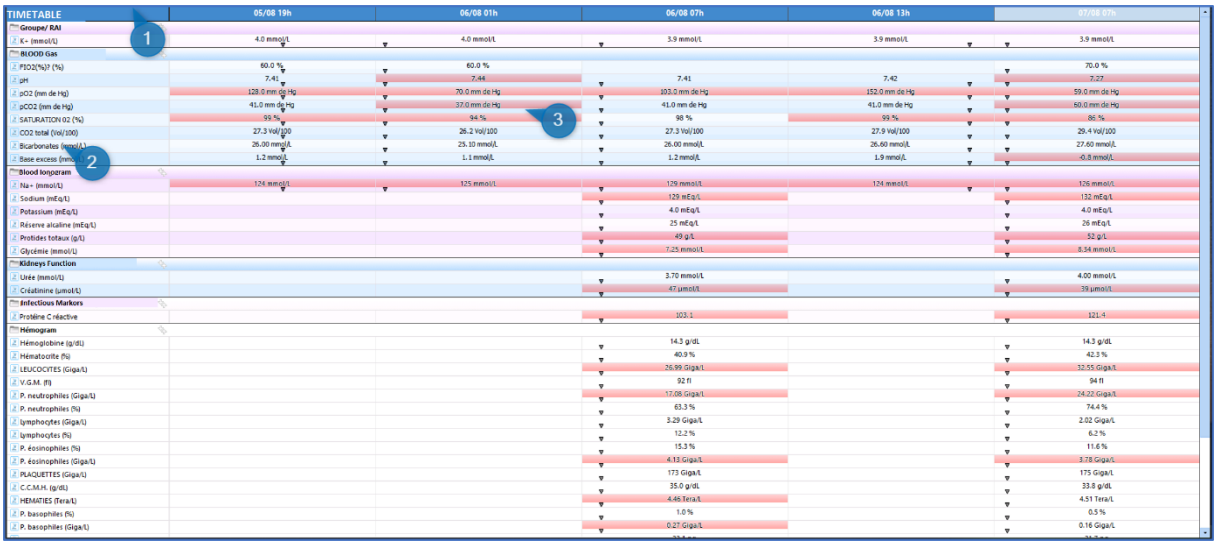
- all patients under your care



4.11 Lab test tab

The application directly incorporates the patient's lab test results.
They are displayed in the form of a grid in a specific **Lab** tab. The entire PDF file containing the results sent by the laboratory can also be viewed.

In the example below, this tab is divided into subtabs for you to split the different results according to category.
This organization also lets you see a summary of the patient's results over several days, here one week, to easily analyze changes.

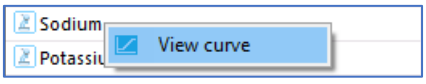


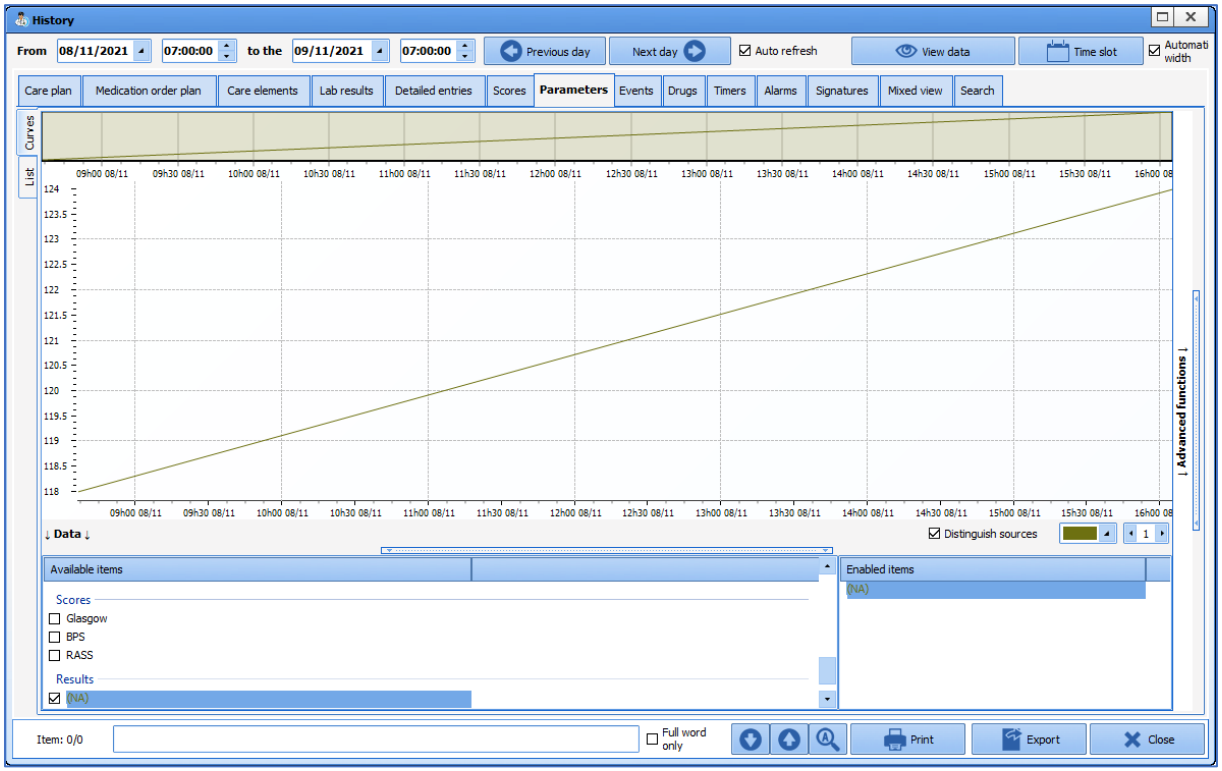
(1) Subtab to browse through the different categories.
(2) Heading area incorporating the parameter names used by the laboratory, and the units.
(3) Grid display area. The results are displayed by column.

When the laboratory sends the results, it also sends us the units, normal ranges, comments and interpretations. All of this information is displayed in **DIANE**.

In the example above, the red cells show that the results are outside normal values.
Clicking on the cell displays the details of the test.

It is possible to display the results as a curve by right-clicking on the analysis you want to see.



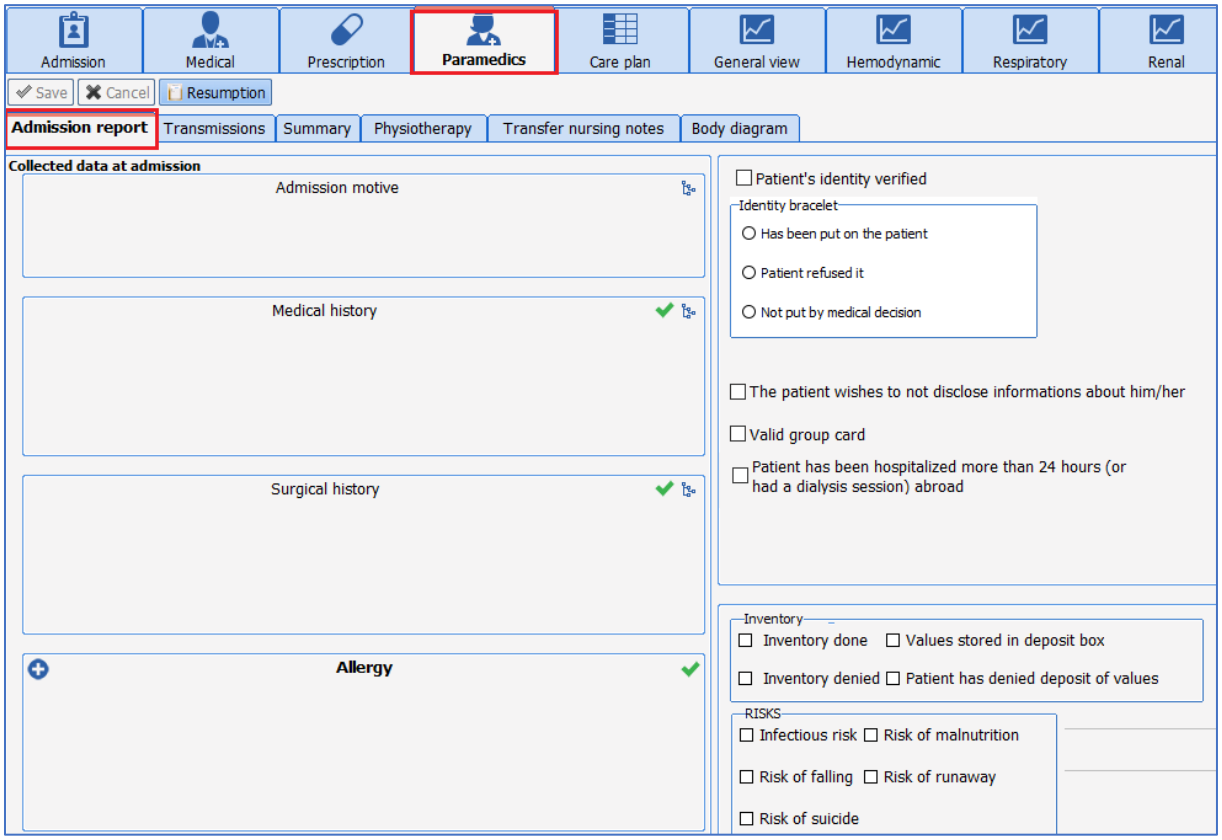


4.12 Paramedical tab

The **Paramedical** tab is used to collect patient information in connection with the paramedical professions. This tab is made up of several subtabs that are described in the next chapters.

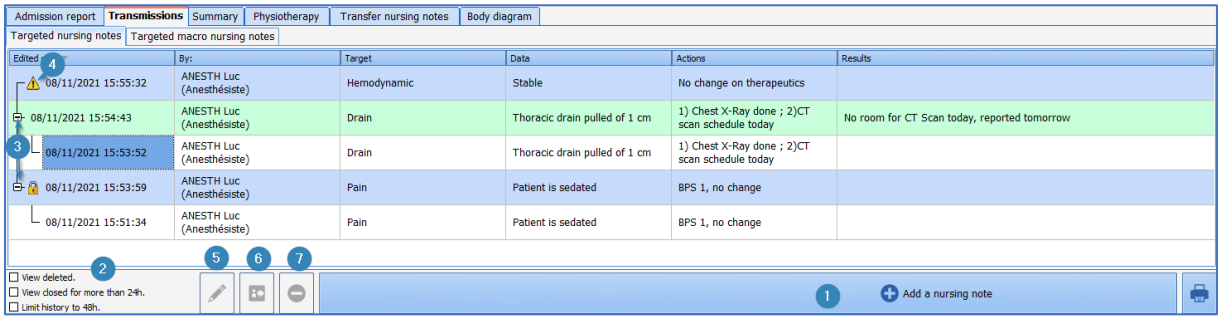
4.12.1 Situation at admission subtab

This subtab contains different information such as history, usual treatment, etc. which is information collected by the doctor in his admission observations. This information can be read-only, i.e. it cannot be modified from this tab. This lets you quickly review information without having to switch between tabs while retaining limited writing access.
Other information is also present in this tab, which is collected and entered by paramedical staff. Example: checking the identity, the presence or absence of relatives, assessing autonomy and different risks, etc.



4.12.2 Issue-based nursing notes

A component here lets you enter nursing notes using issues based on the DAR model (Data - Actions - Results)

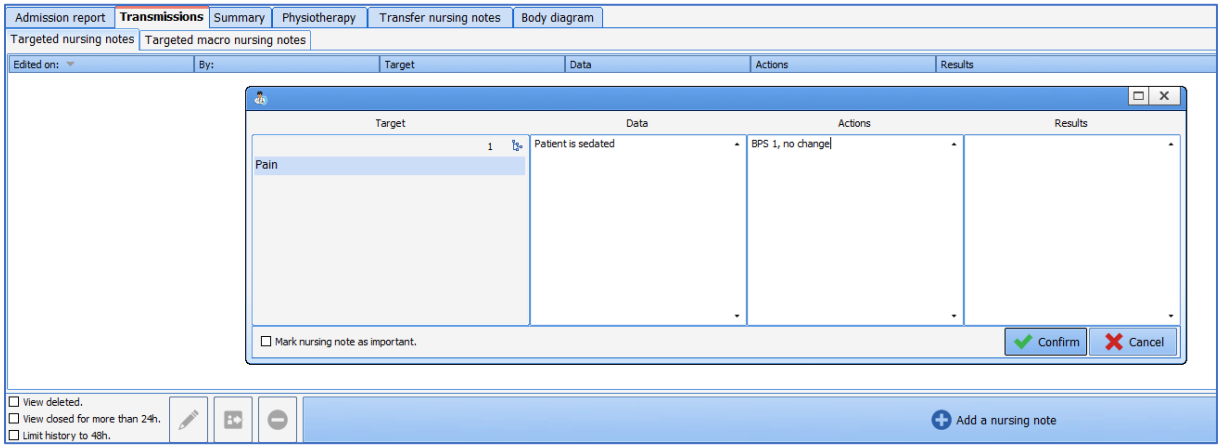


(1) Button to add a nursing note.
(2) Nursing note display options.
(3) History of nursing notes since the issue or problem.
(4) Issue importance marker.
(5) Lets you change the nursing note.
(6) Used to 'close' an issue. When the problem is no longer relevant, this lets you display only today's information. The information can be redisplayed by ticking the 'View closed for more than 24h' box.
(7) Used to delete a nursing note. Can only be done by the user who entered it.

4.12.2.1 Adding a new nursing note:

- Click on the Add a nursing note button **(1)**

- The data entry window opens. This is made up of four columns: issues, data, actions and results. Only the first column uses a predefined list that is modifiable **(2)**. However, it is still possible to enter the information manually without using the list.
- To save the nursing note you must enter data in the first three columns (issues, data, actions).
- Lastly, you can mark the nursing note as important by ticking the box **(3)**.



4.12.2.2 Add to a nursing note or generate a nursing note using an issue already present.

- Click on the issue you want to add to.
- The pop-up window opens with the previous data entered.

You can add to the information available. You can also delete the information present to enter new information. **This action will not remove the original content.**

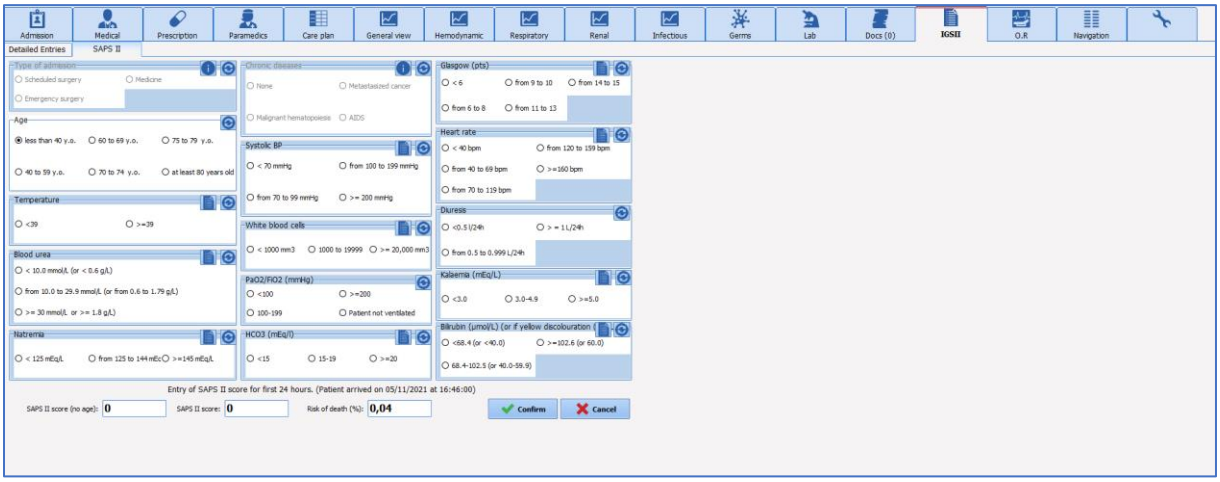
4.13 SAPS II tab

DIANE ICU has a specific tab to calculate the **SAPS II.**
The data extracted comes from the record's different sources. Only data from the first 24 hours of hospitalization is kept, so the score can be confirmed afterwards.
The worst data from the first 24 hours is entered in the fields.

4.13.1 Entering and confirming the SAPS II score

- When the tab opens, click on the **Enter** button.

- This gives you access to the data entry fields.



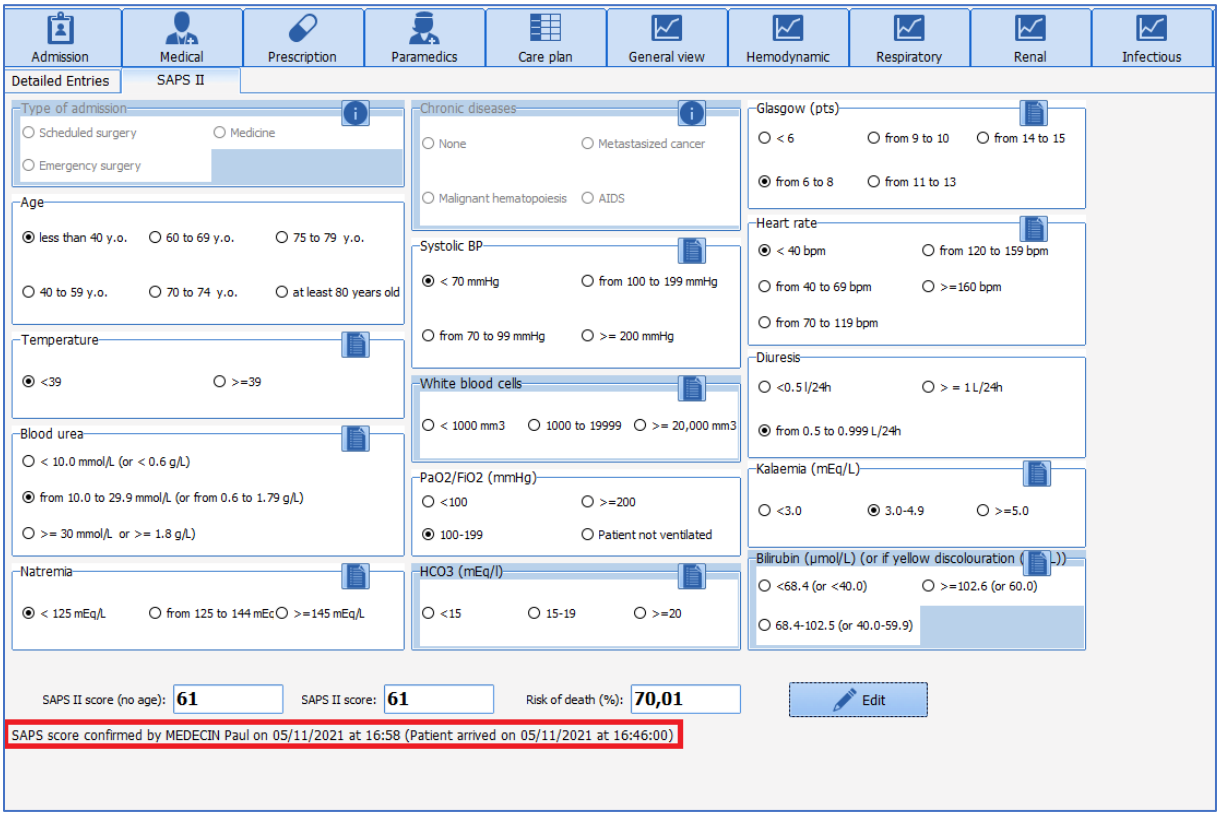
(1) and (2) are specific fields communicating directly with the data entry fields present in the Admission observations as shown by the icon to the right of the component. These fields can only be filled and changed from the **Doctor** tab.

(2) Example of a field filled in by the application from the biological data in the record. Here the data used is the worst data over the first 24 hours. This data can be changed manually if it is not representative of the clinical situation.

(3) Fields circled in grey, like PaO2/FiO2 here, indicate that the data has not been recovered.

(4) Button to display the data in the record.

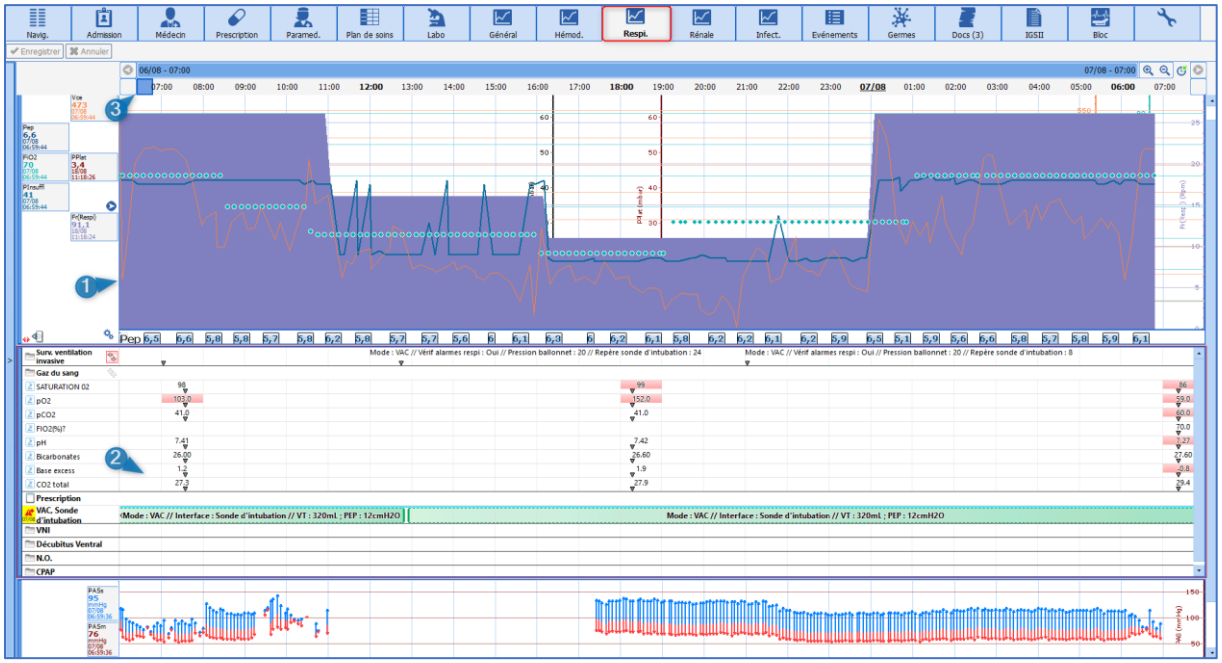
- Change the data if necessary.
- Complete the fields outlined in grey.
- The score is calculated automatically (area outlined in red).
- Confirm by clicking on the button.
- Enter your password.
- The score is now confirmed: the date and time and the name of the person in charge are automatically entered.



- The **Change** button is now available to let you go back and change the entry if necessary.

4.14 Cross-referenced data tabs: haemodynamic, respiratory, renal, etc.

Another type of tab is available in the application to give a combined display of the different data in the record.
These tabs are dynamic and also let you enter information.
They are useful in that they enable a more detailed analysis of the clinical situation.
In the example below, the data displayed lets you see all of the different respiratory system data.
This dynamic display gives a quick view of the data over a longer or shorter period simply by sliding the time cursor in **(3)**.



(1) Curve pane displaying data retrieved from biomedical devices such as the ventilator.
These curve panes also display data such as weight, lab results, etc.
(2) **Diagrid**-type display area to provide information from the **Care plan** but also enter it.

4.14.1 Alarm log

Here we find the list of alarms transmitted by the biomedical equipment with their **Start** and **End** times. More than 500 alarms can be transmitted by biomedical equipment connected to **DIANE** via the RS232 link. These alarms appear in descending order of occurrence so that the most recent alarm triggered is always at the top of the **Alarm log**.

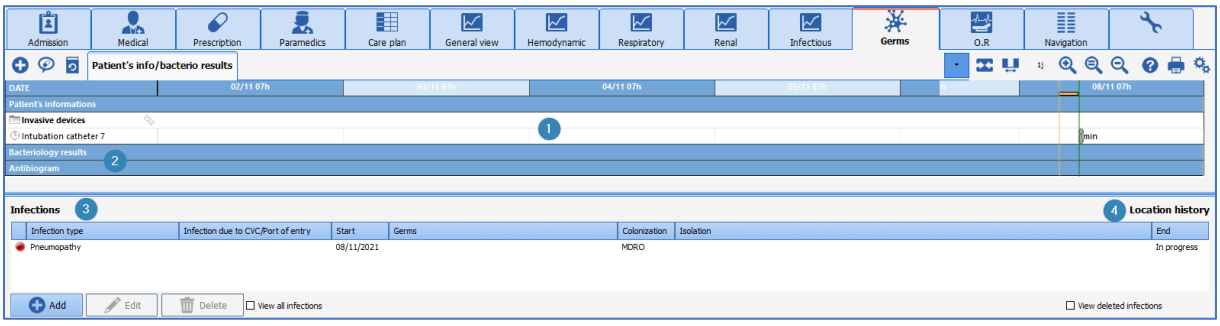
NB: The alarms cannot be changed or deleted**.**

You can display the alarms as a on the markers line using the specific **Alarms On/Off** button

4.15 Germs tab

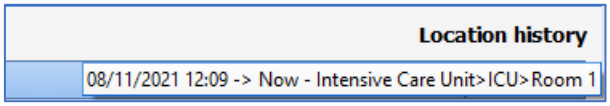
This tab lets you monitor the patient's infection status.

It has a configurable upper section showing the patient's different bacteriology results and how long the various invasive devices have been present, to help monitor nosocomial infections.



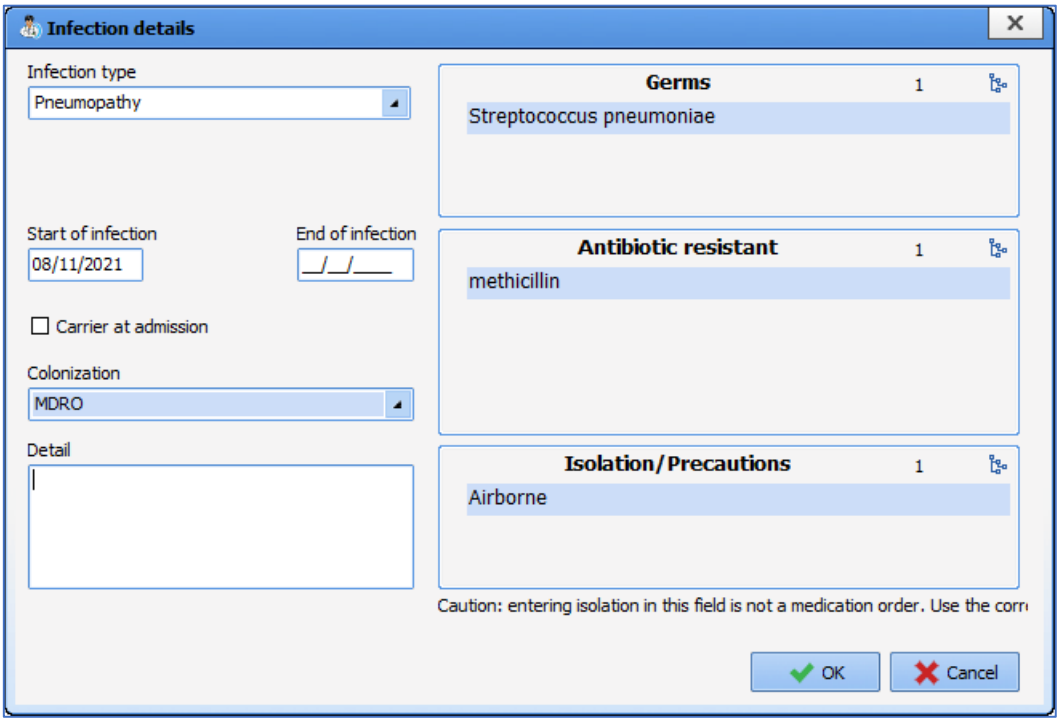
(1) Duration of presence of invasive devices.
(2) Patient's bacteriology results.
(3) Area to enter different information about infections.
(4) View of the patient's different geographical movements within the DIANE application to help track contact patients.

Example: cardiology OT 2, ICU room 6, CCU room 3. This information is visible when you hover over the title **Location history**.



4.15.1 Add to/Enter the presence of an infection in the patient.

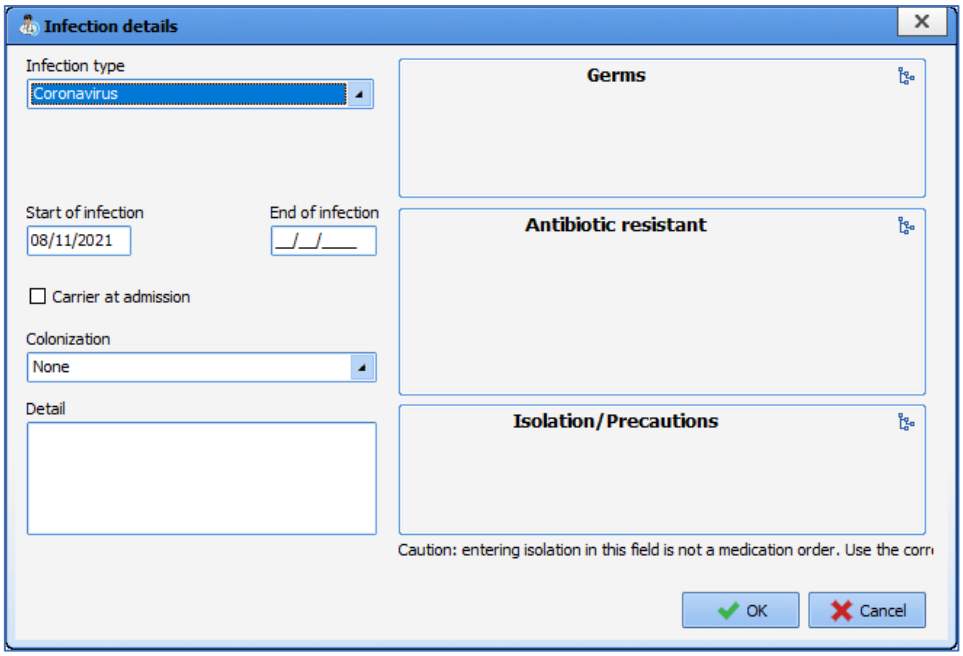
- Click on the **Add** button at the bottom left of the tab.
- The pop-up window opens to complete the information.
- Enter the different information: type of infection, type of colonization, germ present and antibiotic resistance
- Confirm.



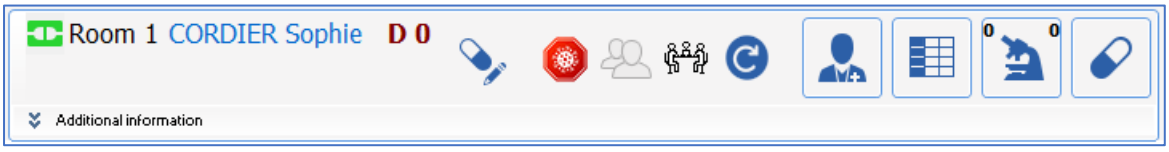
When an MDRO or XDRB type colonization is entered, a pictogram indicating the presence of an infection is visible on the application ribbon and on the cockpit.

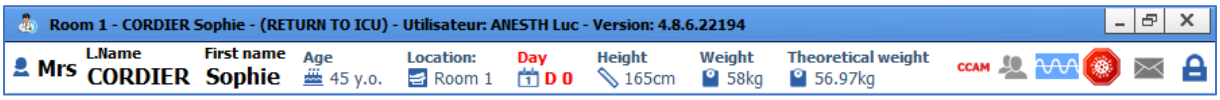
4.15.2 COVID infection

- Click on the **Add** button at the bottom left of the tab.
- The pop-up window opens to complete the information.
- Enter **Coronavirus** in **Type of infection.**



The icon appears on the portal and on the banner at the top of the patient's record.





4.16 Body diagram

A care item can be entered directly from the **Body diagram** subtab of the Paramedical tab.

The following steps must be carried out:

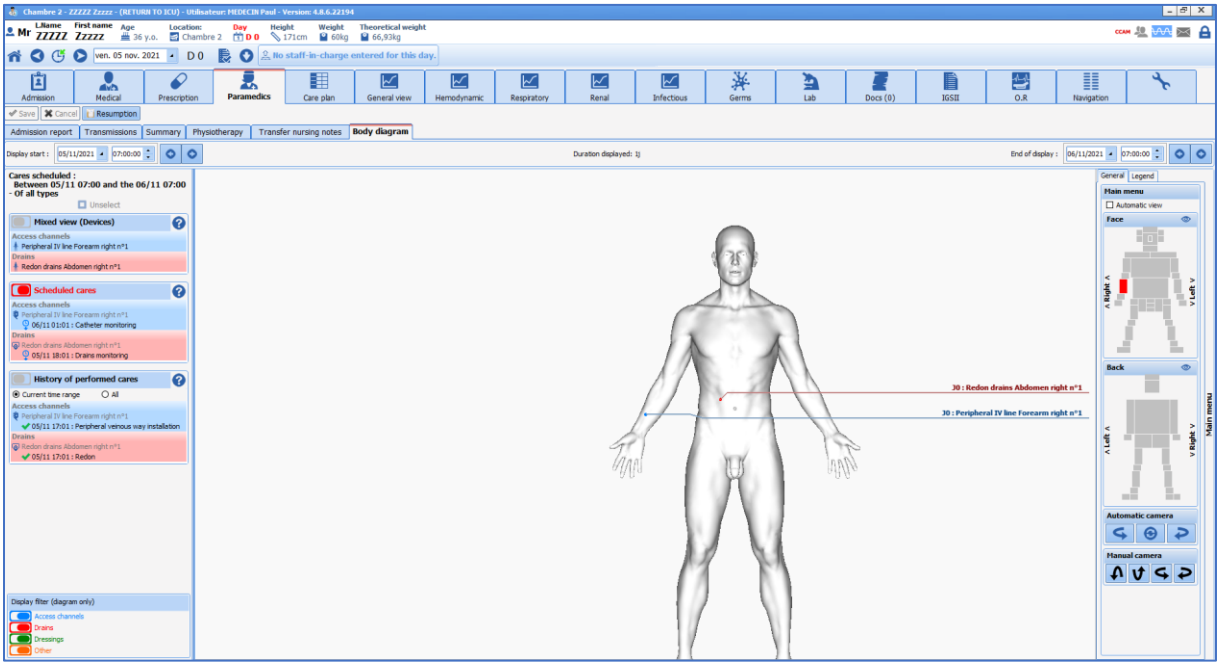
- Choose the area where the care item is applied,
- Choose the care item,
- Fill out the initial form and schedule the next form.

You can associate the care item with:

- A score,
- A fluid balance,
- Images.

4.16.1 Positioning a medical device

The **body diagram** allows you to position the care directly on a 3D model of the patient.



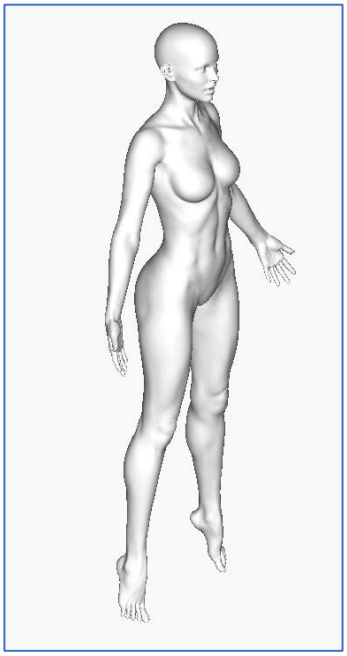
The various care items are identified by a description colour coded by category:

- Blue for access points.
- Red for drainage points.
- Green for dressings.
- Orange for other care items.

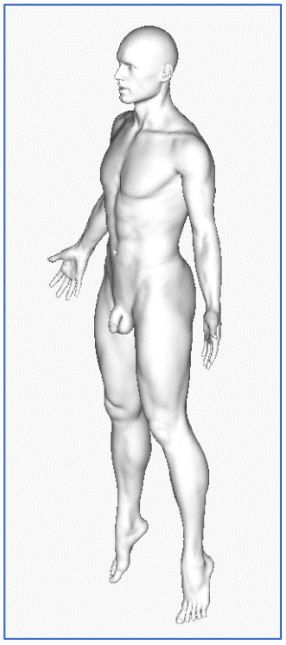
If a device is located on a part of the body that is not visible on the 3D model, the description appears in a light colour.

The **Care history** view lists the various treatments administered for each device.

The 3D model adapts to the patient's gender.

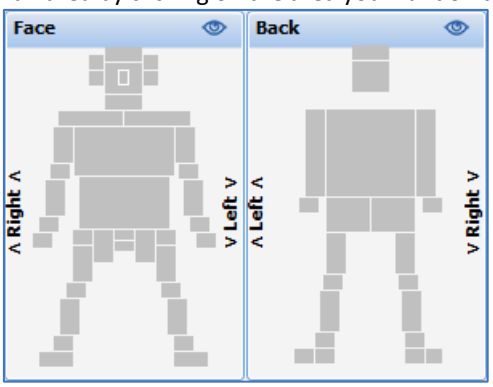


Woman



Man

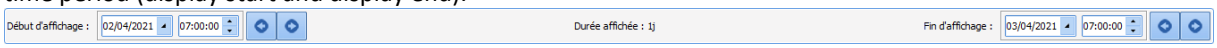
You can move around the model by clicking and holding your mouse button outside the model and then moving your mouse.
You can also directly zoom in on an area by clicking on the area you want on the right in the navigation pane.



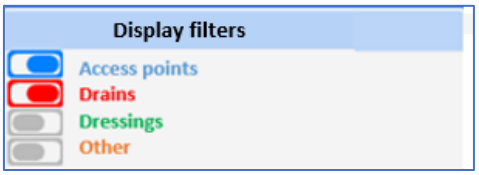
Each grey rectangular area is active and lets you zoom in on the corresponding area of the body diagram.

Various icons allow you see, in the left column, active devices and administered, delayed or planned care.

The timeline lets you show only devices and scheduled and pending care plan items for a specific date and time period (display start and display end).

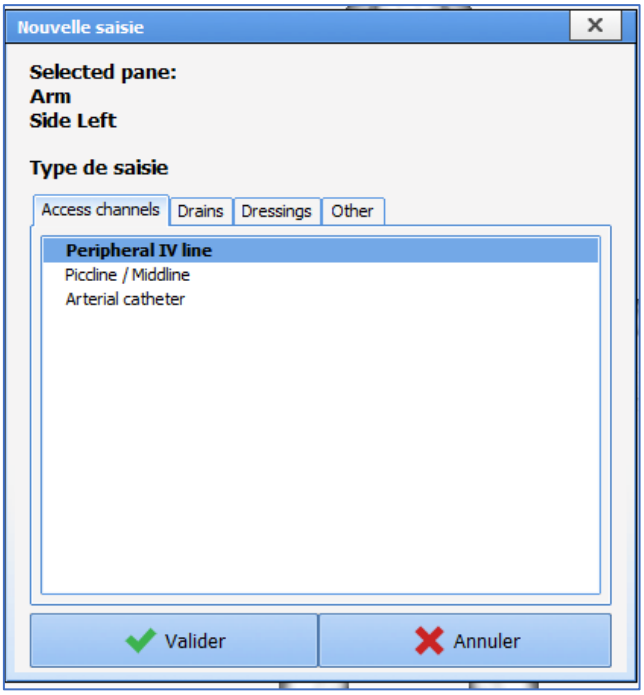


The various devices can be filtered for easier viewing (of the diagram only). For example, the configuration below only displays **Access points** and **Drains** care items.



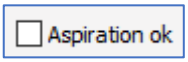
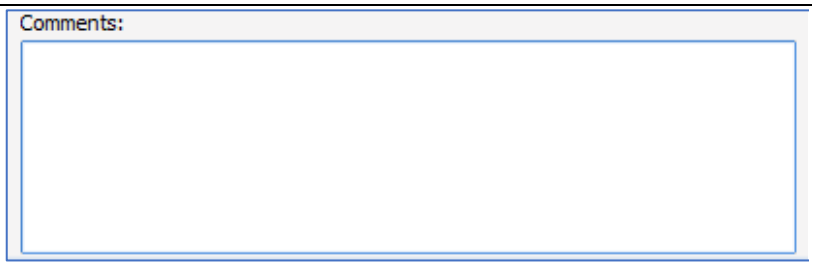
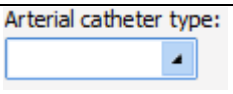
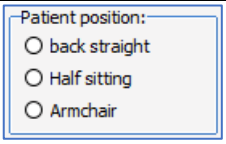
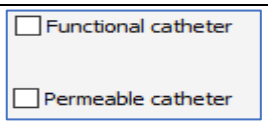
4.16.2 Choosing the medical device

After clicking on the 3D diagram, a window opens with the different care items configured for the selected area. You can choose from several care items then confirm.

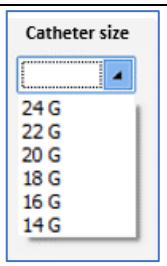


4.16.3 Completing the medical device placement form

The forms contain the following components:

Component	Example
checkbox	
multi-line input field	
one-line input field	
radio button group	
checkbox group	

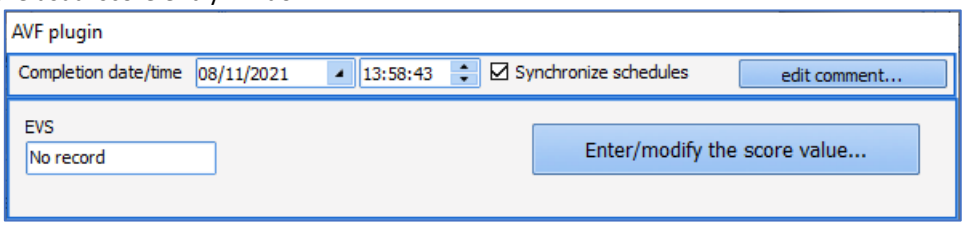
drop-down menu



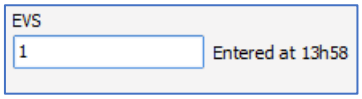
Once the information has been entered, you can confirm the form by clicking on the Save button.

4.16.3.1 Associate a score

If a score is associated with the care item, it is entered when creating the forms. Clicking on the button displays the usual score entry window.

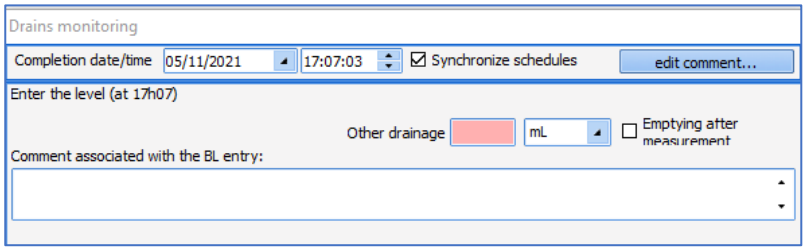


The score and entry time are displayed.



4.16.3.2 Associate a fluid balance

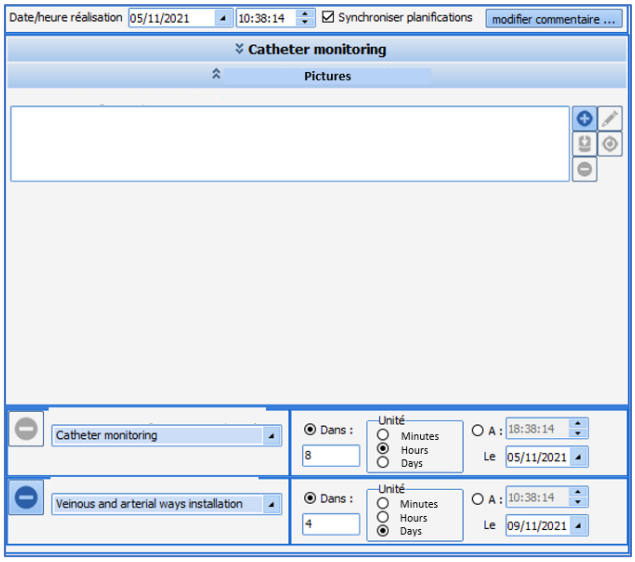
If a fluid balance is associated with a care item, it is entered when creating the forms.



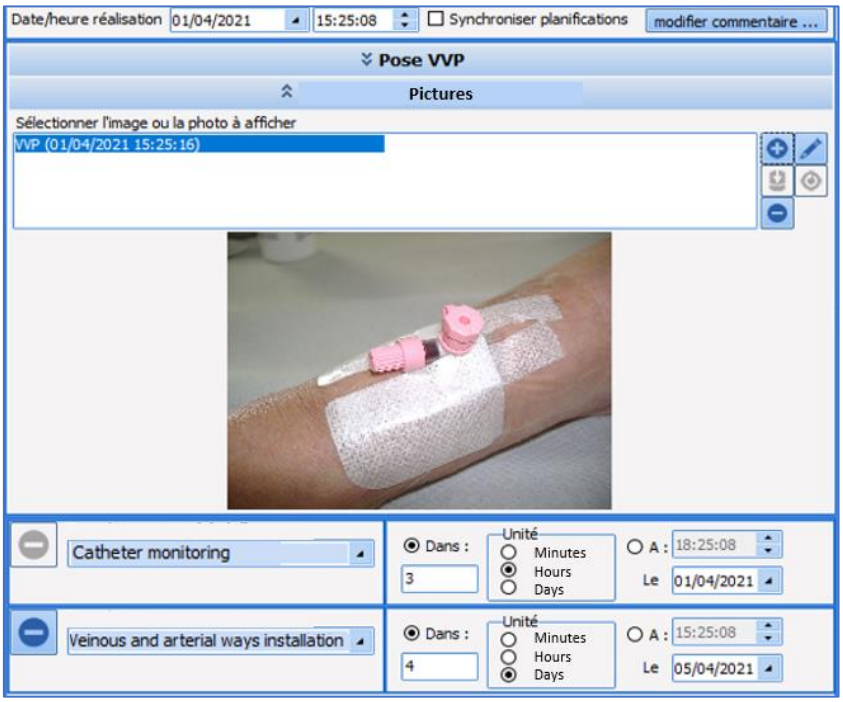
The 'Empty after measurement' checkbox lets you reset the counter. Enter the fluid balance level. It is not necessary to subtract the previous level from the current one to get the correct level. For example, if the level of a drain is 50 mL at the first reading, and then 70 mL at the second reading, just enter 50 mL and then 70 mL in the forms. The application will carry out the subtraction and record an increase in level of 20 mL. When changing a container, you must check the 'Empty after measurement' box to reset the counter.

4.16.3.3 Associate images or photos

You can associate an image or photo with a care item:



The button lets you add an image that is on the computer used. If an image has been added to the **Documents** tab, it can be recovered using the button. In this case it is deleted from the list of documents.

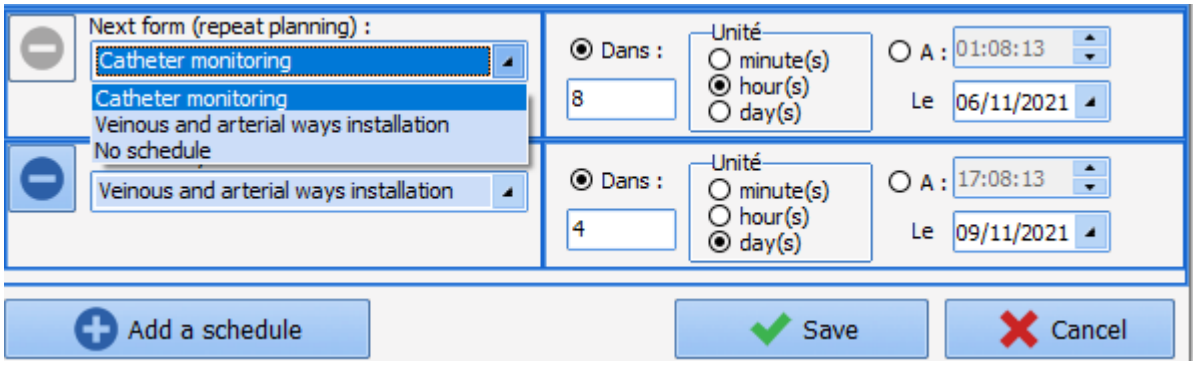


You can change the image by clicking on the button. The button cancels the changes made. Only the image associated with the form being created can be modified: the images added in a previous form cannot be modified.

4.16.3.4 Choosing and scheduling the next form

The next form can be selected. You can choose:

- one of the configured monitoring forms,
- the removal form (if configured),
- no schedule (care has ended).

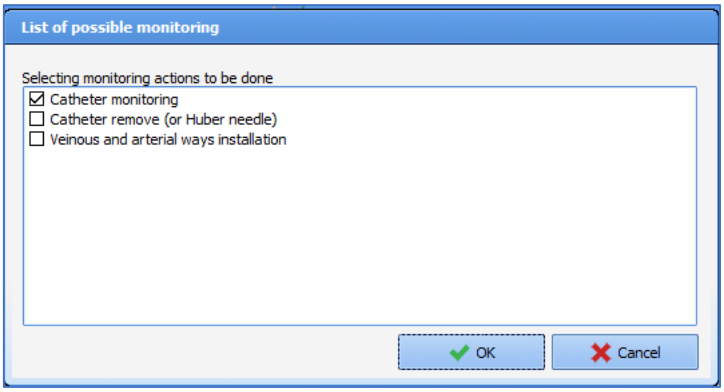


There are two ways to schedule the next form:

- by choosing an interval after the current form,
- by choosing the date and time.

You can schedule multiple forms or delete some of the forms configured for the care item. You cannot delete all schedules. If you do not want to schedule any more forms, you must select **No schedule**.

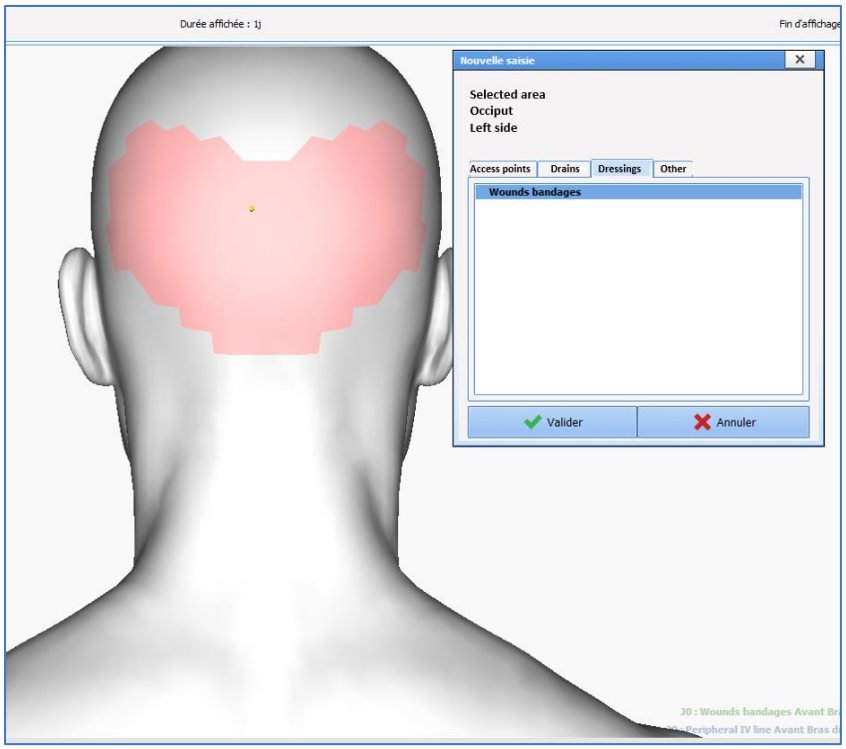
In the care plan, double-click to select a form in the list of configured forms. If a score and/or fluid balance is associated with the device, you can enter just the score or fluid balance.



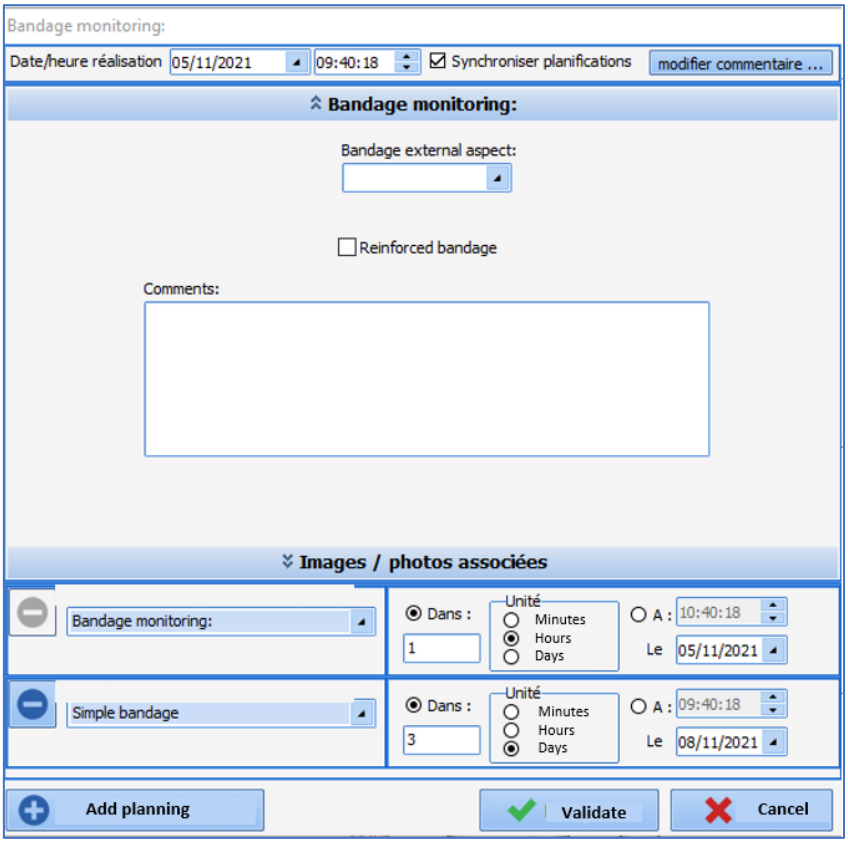
4.16.3.5 Example: applying a dressing

When you click anywhere on the model, a device window appears displaying the care items configured for the corresponding area.
These **care items** are divided into four categories:

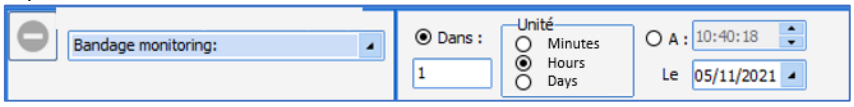
- Access points,
- Drains,
- **Dressings,**
- Other.



In the rest of this chapter, we will look at the management of a dressing from placement to removal.



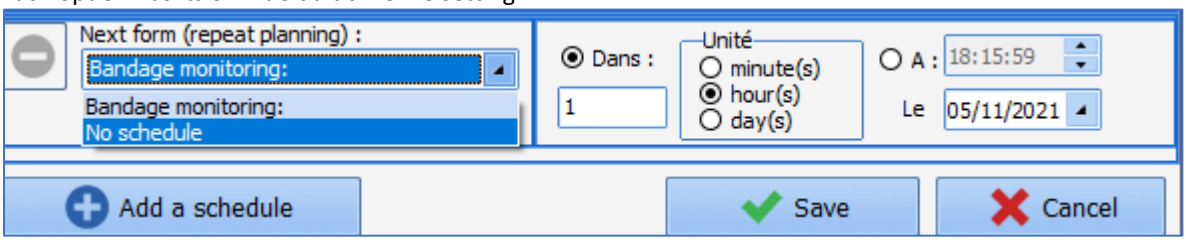
Two choices are possible:



In this menu, you have the scheduled monitoring form(s) as well as the removal form (if scheduled). The first are for potential monitoring purposes, then there is the removal form.

NOTE: No scheduling is the only option that is always suggested. The rest are configured by the key users.

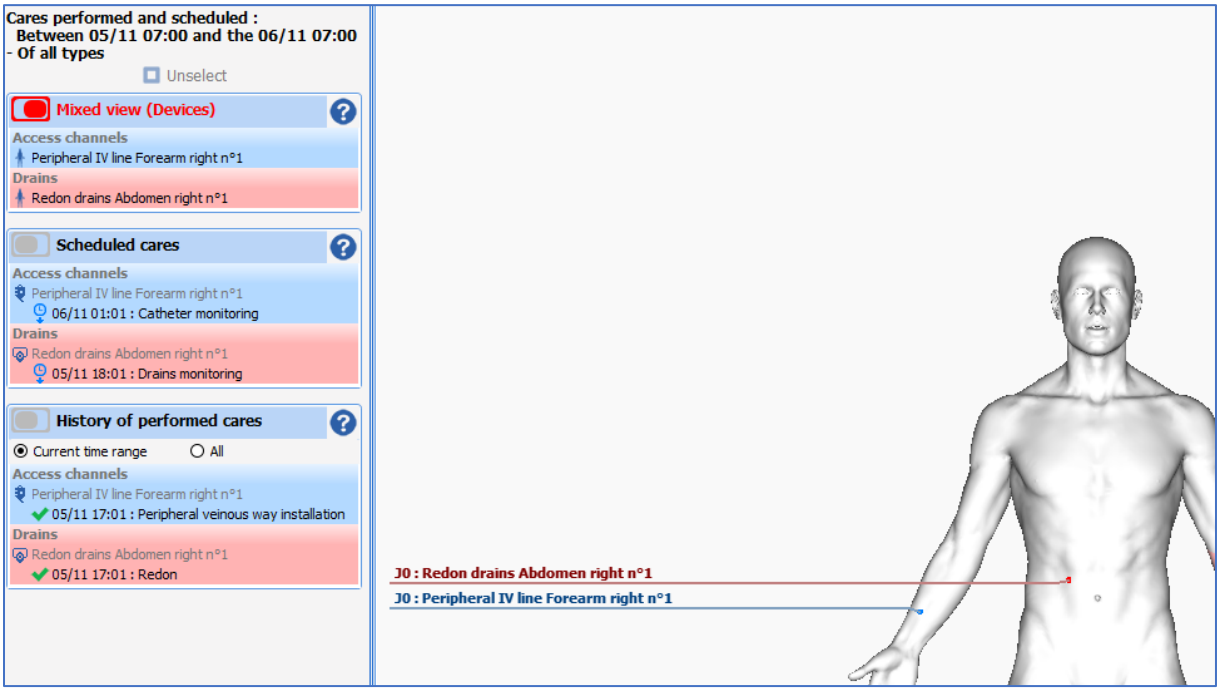
Each option has its own default timeline setting.



The sequence of monitoring care forms is built up as the situation progresses.

4.16.3.6 Example: removal of a dressing

After the removal (and, where applicable, the post-removal form) is confirmed, the left column shows the list of devices in the mixed view. As the device has been removed, no other care items are scheduled for it.



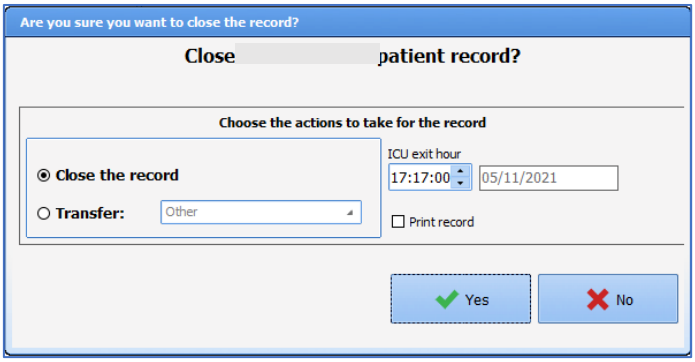
4.17 Discharging the patient

The patient is discharged using the **patient discharge** button in the Main menu tab.

When you click on the

button at the bottom of the first column of the main menu tab, a window opens for you to choose to close the record or transfer the patient.
The record must be closed when the patient will no longer be monitored in DIANE, whereas the record must be transferred if the patient is monitored in another unit still using the DIANE software even if it is a different module.

For example: when a patient comes from the operating theatre and the OT uses DIANE ANAESTHESIA, the patient will be transferred when leaving the OT. At the end of hospitalization, if the patient is transferred to a medical unit that does not use DIANE, the record must be closed. However, if the patient is hospitalized in a unit (e.g. CCU) that uses DIANE, the patient must be transferred.



When the patient is discharged, some actions may be necessary to close or transfer the record (checklist not completed, current medication order, etc.). In this case DIANE will ask you to confirm the checklist and if you

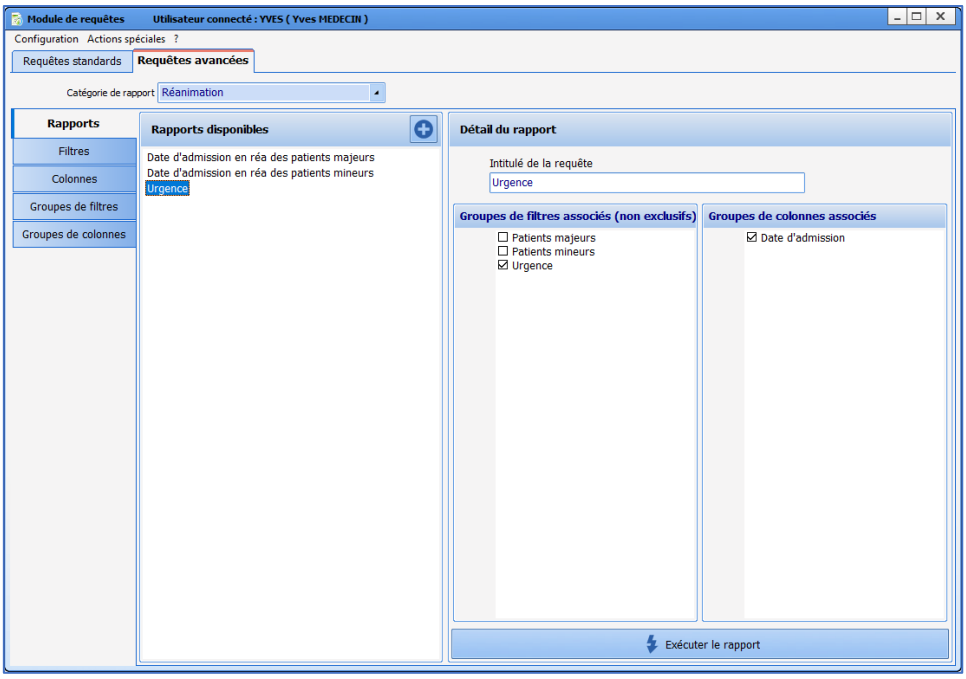
want to keep the current medication orders. They can be maintained if the record is transferred. If the record is closed, it is better to stop all current medication orders.

NB: Once discharged, you can reopen the patient's record by clicking on **Resume ICU** in the surgery selection window.

5. QUERIES

The query tool lets you extract information from the database to compile statistics (OT occupancy times, average duration and standard deviation of stay on the site, etc.). There are three categories of reports (Anaesthesia, ICU or Obstetrics).

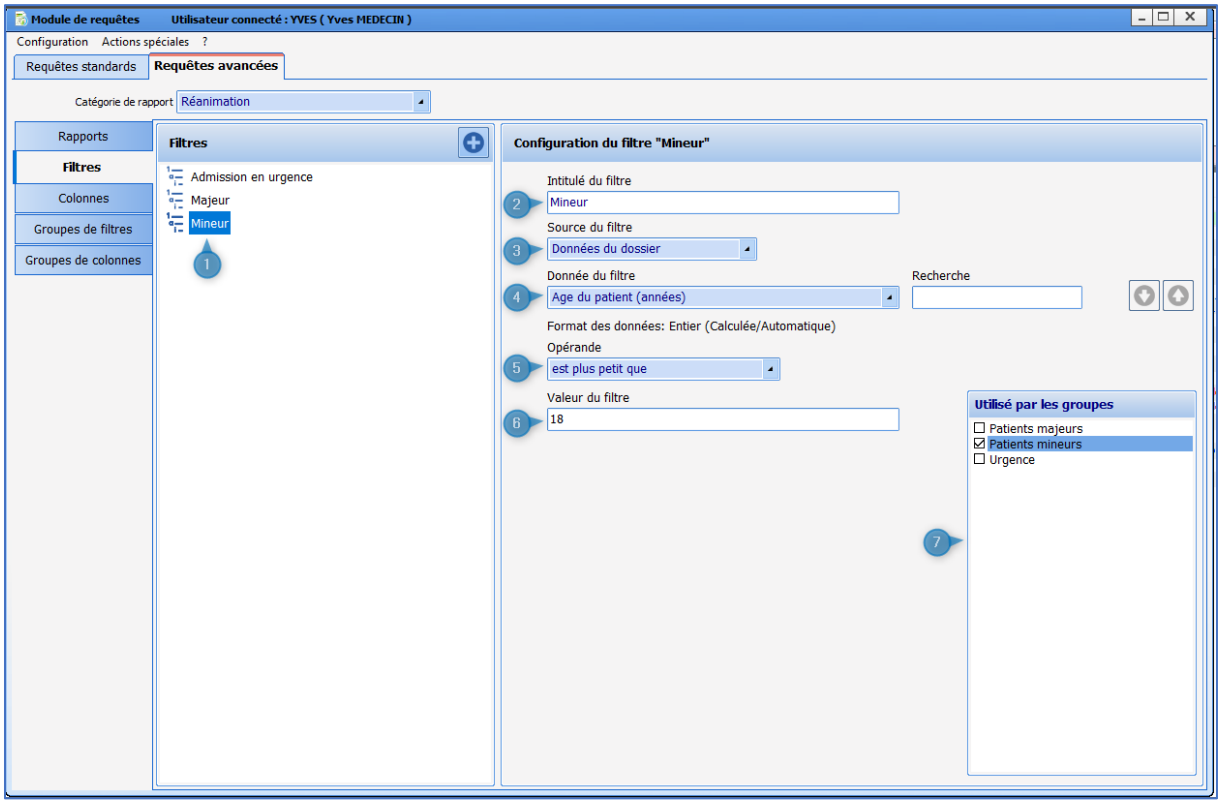
5.1 Queries module presentation



The queries module is used to generate reports. For each report, you can configure data filters and choose which columns to display.

5.2 Creating filters and filter groups

Filters are configured in the **Filters** subtab.



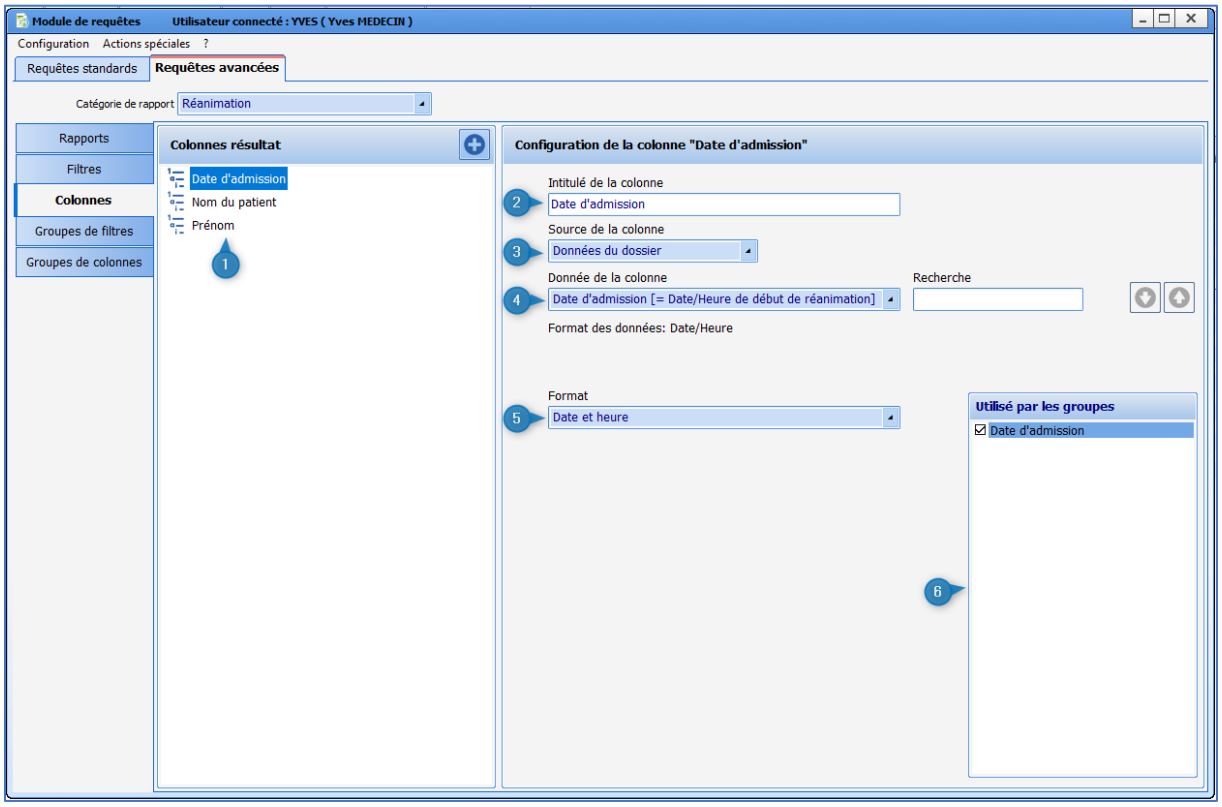
1. List of filters already configured
2. Filter name
3. Source of filtered data
4. Data on which the filter is based
5. Operand: depends on the type of data (number, date or text)
6. Value to which the data can be compared: depends on the operand and type of data
7. List of filter groups using the filter being configured: you can assign the filter to a filter group by ticking the box (or remove it by unticking the box).

To create a group of filters, click on the button, name the filter and tick the filters assigned to this group.

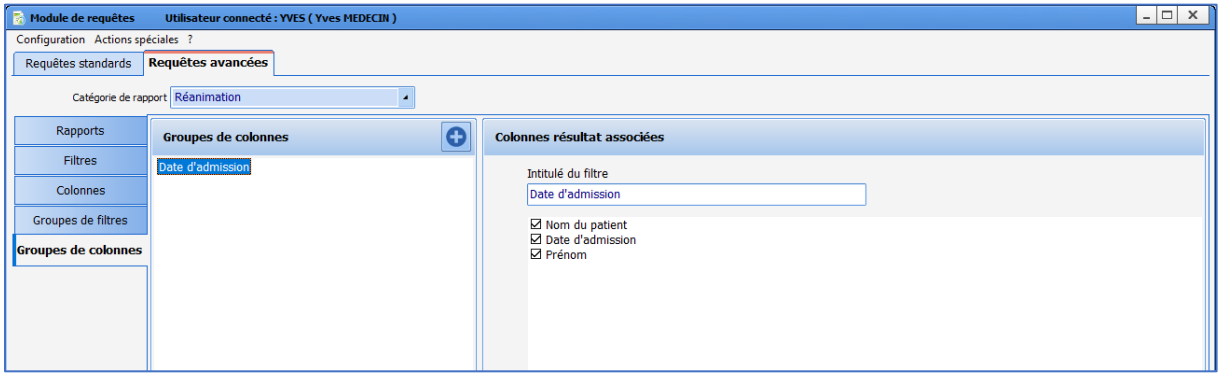
A filter group lets you select the data that is valid for all the filters in the group. For example, a group made up of the filters **Age ≥20** and **Age <30** will select patients aged 20 to 29.

5.3 Creating columns and column groups

Columns are configured in the **Columns** subtab.

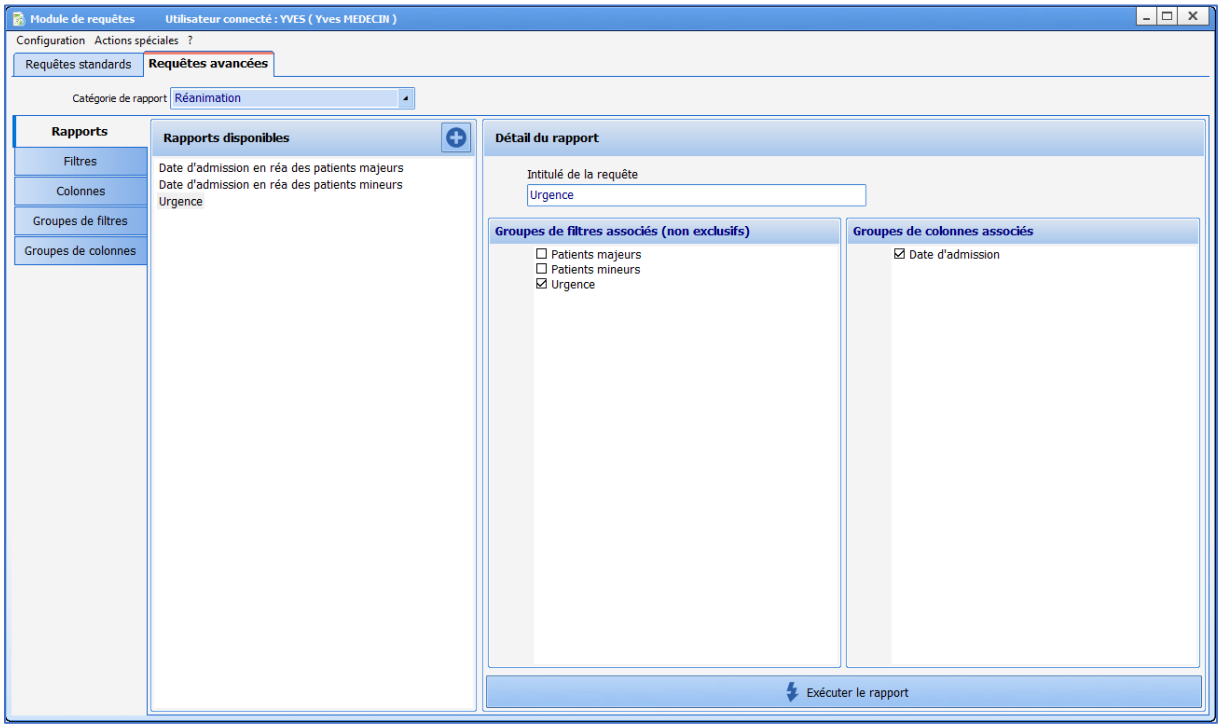


1. List of columns already configured
2. Column name
3. Data source used: it is possible to use data from the record, timers and detailed entry fields or score fields.
4. Data used for the column (for detailed entries or scores, the field must also be selected)
5. Data format (only valid for Date/Time type data)
6. List of column groups using the column being configured: you can assign the column to a column group by ticking the box (or remove it by unticking the box)



A column group groups together one or more columns: the columns are (de)selected by (un)ticking them in the **Associated results columns** area. It is also possible to reorganize the columns by dragging and dropping them in the **Associated results columns** area.

5.4 Creating reports



A report displays the data filtered by one or more filter groups in a table whose columns are determined by the column group(s).

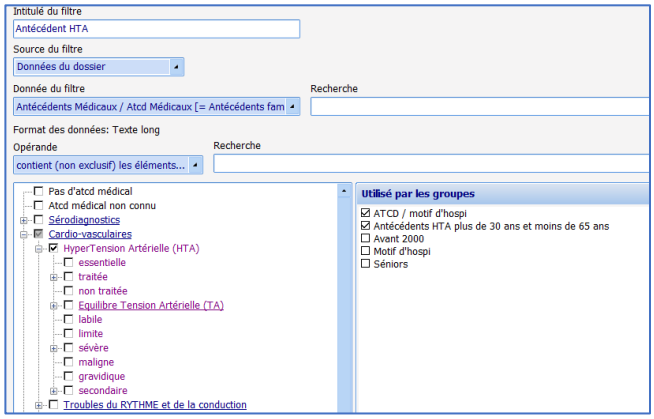
If more than one filter group is selected, the data displayed will be data that is valid for at least one of the filters. For example, **Age <20** and **Age >30** filter groups will select patients under 20 and those over 30.

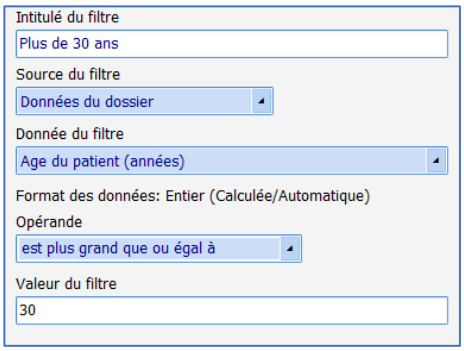
Caution: if a column is present in several filter groups, it will be displayed several times.

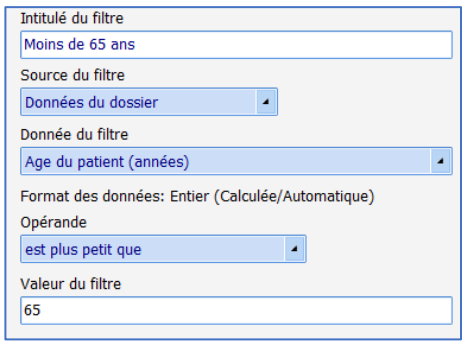
5.5 Example of report

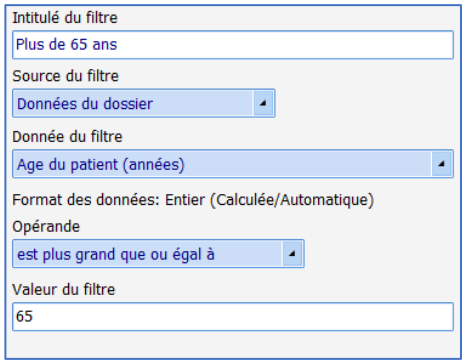
View history and date of birth of patients aged 30 to 65 with a history of hypertension or aged over 65.

Create **History of HT**, **30 or over**, **Under 65** and **65 or over** filters

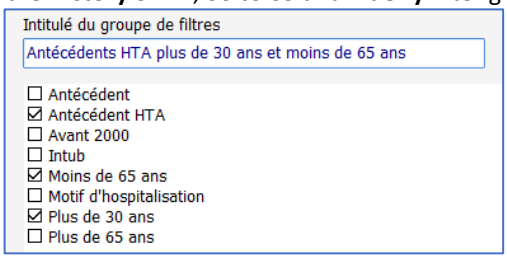




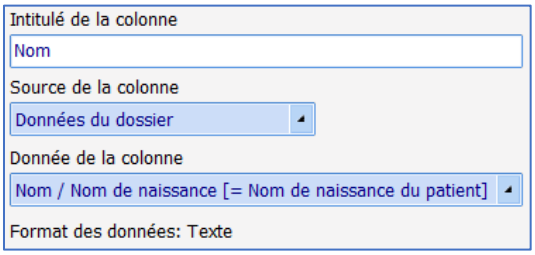


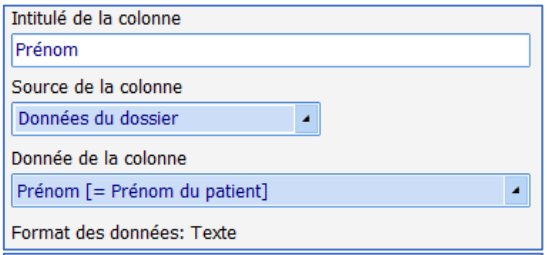


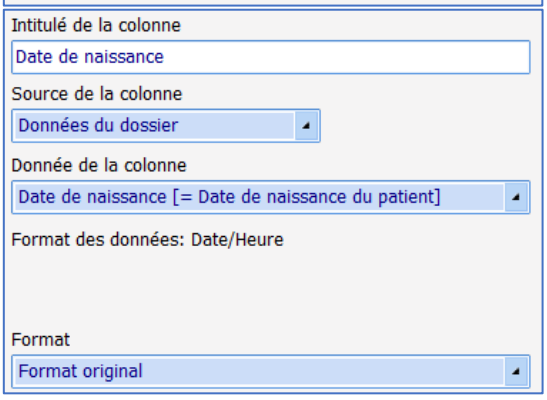
Create the **History of HT**, **30 to 65** and **Elderly** filter groups

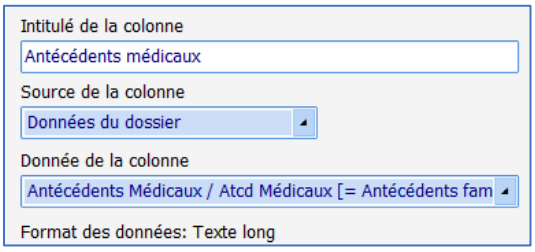


Create the **Last name**, **First name**, **Medical history** and **Date of birth** columns







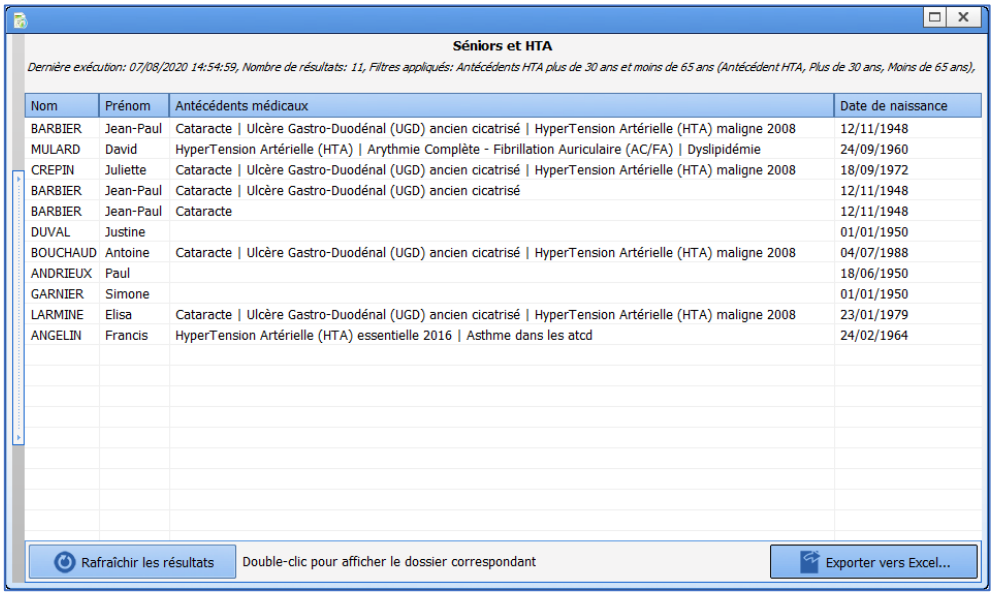


Create the **History and date of birth** column group

Create the **Elderly and HT** report

Click on the **Execute report** button

The report is displayed:



Séniors et HTA

Dernière exécution: 07/08/2020 14:54:59, Nombre de résultats: 11, Filtres appliqués: Antécédents HTA plus de 30 ans et moins de 65 ans (Antécédent HTA, Plus de 30 ans, Moins de 65 ans),

Nom	Prénom	Antécédents médicaux	Date de naissance
BARBIER	Jean-Paul	Cataracte | Ulcère Gastro-Duodénal (UGD) ancien cicatrisé | HyperTension Artérielle (HTA) maligne 2008	12/11/1948
MULARD	David	HyperTension Artérielle (HTA) | Arythmie Complète - Fibrillation Auriculaire (AC/FA) | Dyslipidémie	24/09/1960
CREPIN	Juliette	Cataracte | Ulcère Gastro-Duodénal (UGD) ancien cicatrisé | HyperTension Artérielle (HTA) maligne 2008	18/09/1972
BARBIER	Jean-Paul	Cataracte | Ulcère Gastro-Duodénal (UGD) ancien cicatrisé	12/11/1948
BARBIER	Jean-Paul	Cataracte	12/11/1948
DUVAL	Justine		01/01/1950
BOUCHAUD	Antoine	Cataracte | Ulcère Gastro-Duodénal (UGD) ancien cicatrisé | HyperTension Artérielle (HTA) maligne 2008	04/07/1988
ANDRIEUX	Paul		18/06/1950
GARNIER	Simone		01/01/1950
LARMINE	Elisa	Cataracte | Ulcère Gastro-Duodénal (UGD) ancien cicatrisé | HyperTension Artérielle (HTA) maligne 2008	23/01/1979
ANGELIN	Francis	HyperTension Artérielle (HTA) essentielle 2016 | Asthme dans les atcd	24/02/1964

Rafraîchir les résultats | Double-clic pour afficher le dossier correspondant | Exporter vers Excel...

You can export the report to Excel and open the corresponding records by double-clicking on the patient line.

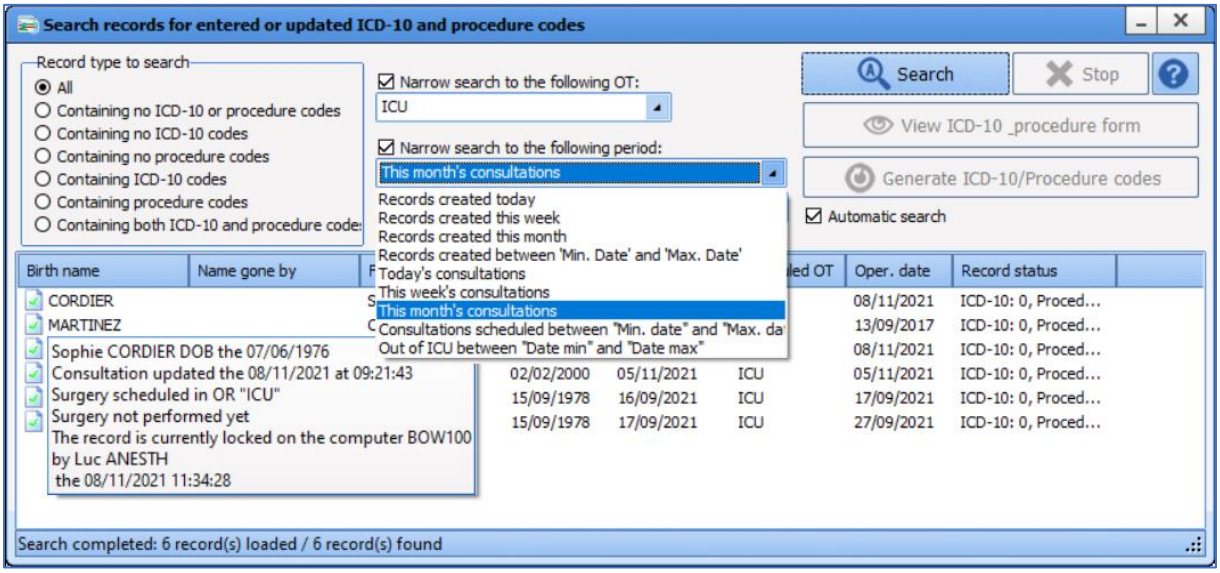
6. ICD-10

6.1 Start up ICD-10 application

To start up the CCAMCIM10.exe application, select **Procedure/ICD-10** in the **Start/Programs/Diane** menu, or double-click on the icon on the Windows desktop. If the shortcut to this application has not been created, you will find the original executable file by following the path **C:\Program Files\Diane\CCAMCIM10.exe**.

CAUTION: do not move the original executable files on the desktop.

This application lets you search records to enter or update ICD-10 and procedure codes. You will scan the relevant patient records to retrieve the corresponding codes, confirm them and export them



6.2 Searching for patient records

To make the patient record search window more compatible with ICU, the list of filtering queries includes an additional query: **Discharged between 'Min date' and 'Max date'**.
This query lets you display the records of patients who left the ICU between the two dates entered by the user.

6.2.1 Record type to search

In the **Record type to search** area, we can see seven different cases:

When the **All** filter is selected (type selected by default when the application opens), the patients in the list are patients whose complete anaesthesia record (preop assessment and intraoperative and/or postoperative information) contains or does not contain ICD-10 and procedure codes related to the patient's anaesthesia record.

When the **Containing no ICD-10 or procedure code** filter is selected, the patients in the list are patients whose complete anaesthesia record does not contain codes related to the anaesthesia record. The **Number of codes** column only displays records stipulating **ICD-10: 0, procedure: 0**.

When the **Containing no ICD-10 code** filter is selected, the patients displayed in the list are patients whose complete anaesthesia record does not contain ICD-10 codes related to the anaesthesia record. The **Number of codes** column displays records stipulating **ICD-10: 0**.

When the **Containing no procedure code** filter is selected, the patients in the list are patients whose complete anaesthesia record does not contain procedure codes related to the anaesthesia record. The **Number of codes** column displays records stipulating **Procedure: 0**.

When the **Containing ICD-10 codes** filter is selected, the patients displayed in the list are patients whose complete anaesthesia record contains ICD-10 codes related to the anaesthesia record. The **Number of codes** column displays records stipulating **ICD-10: 1 or 2 or ...**

When the **Containing procedure codes** filter is selected, the patients displayed in the list are patients whose complete anaesthesia record contains procedure codes related to the anaesthesia record. The **Number of codes** column displays records stipulating **Procedure: 1 or 2 or ...**

When the **Containing ICD-10 and procedure codes** filter is selected, the patients displayed in the list are patients whose complete anaesthesia record contains codes related to the anaesthesia record. The **Number of codes** column does not display records stipulating **ICD-10: 0** and **Procedure: 0**.

6.2.2 Selection filters

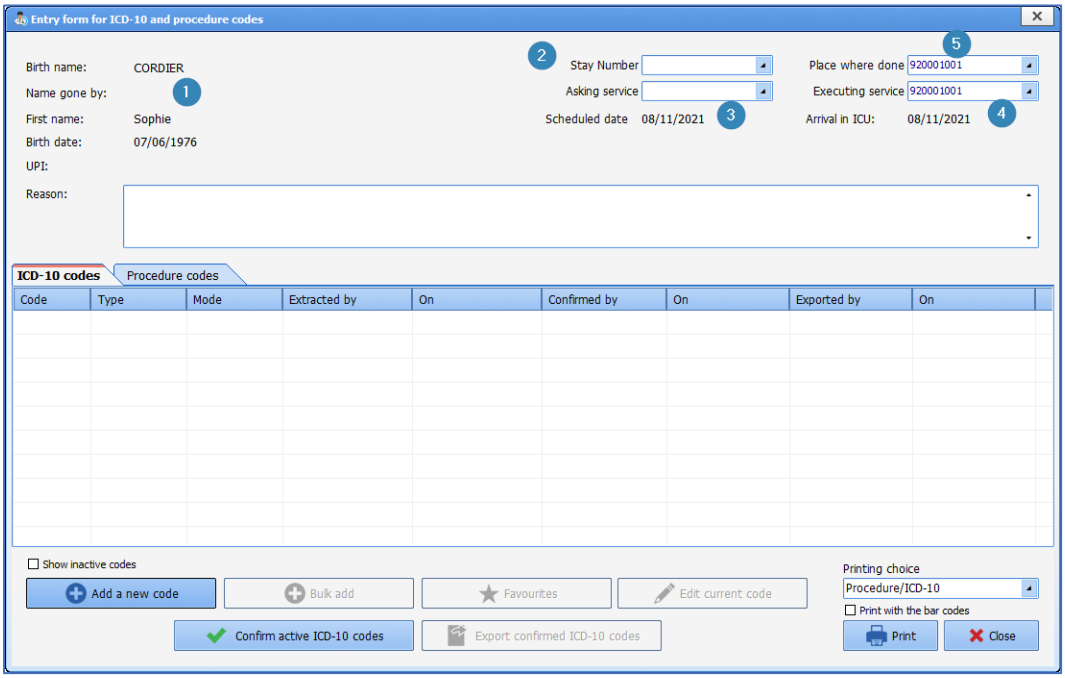
When the application is opened, the search is, by default, limited to the operating theatre in which your computer is configured. You can limit the search to a particular operating theatre. You can also not limit the search and display all the operating theatres in your hospital by unticking the **Narrow search to the following OT** box.

When the application is opened, the search is, by default, limited to surgeries performed that day. You can limit the search to a specific period, such as **Surgeries performed this month** or **This week's consultations**. You can also decide not to limit the search and display all the periods by unticking the **Narrow search to the following period** box.

The **Start search** button lets you start searching for patients according to the filters you have inserted. The **Stop** button is used to stop the current search.
By default, the **Automatic search** checkbox to the right of the window is ticked. If this box is unticked, you must click on the **Start search** button to display the records you are looking for.

The **View ICD-10 & procedure form** button lets you access the **Entry form for ICD-10 and procedure codes**. You can sort the list of patients displayed by clicking on the window column headings.

6.3 Entry form for ICD-10



At the top of the **Entry form for ICD-10**, you will find all the patient's administrative information (1) (last name, married name, first name, date of birth, UPI number), all the information related to the surgery (name of the surgery, date, a surgery completion indicator), and items related to your patient's stay (stay number, place where done, Requesting service and Service performing surgery).

In the **Stay No.** (2) drop-down list, you will find the stay numbers corresponding to the surgery. Several numbers can be associated with the same surgery. The stay number selected by default is the last associated stay.

Regarding the fields **Place where done (5)**, **Requesting service (3) and Service performing surgery (4)**, it is the list of existing services that is displayed. By default, the choices corresponding to the data previously entered in the consultation or intraoperative or postoperative monitoring record are displayed.

The **Requesting service (3)** corresponds to the service of the unit requesting the surgery (value of the field entered in the **Administrative** tab of the consultation record).

The **Service performing surgery (4)** corresponds to the OT service responsible for the surgery.

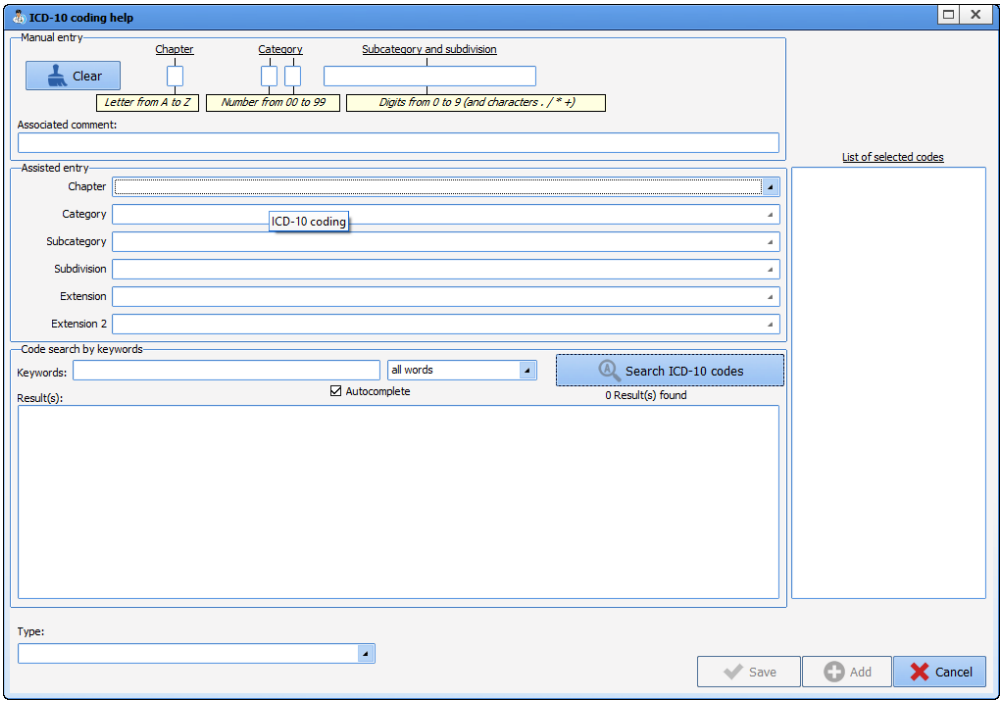
The **Place where done (5)** corresponds to the service where the surgery took place.

6.3.1 ICD-10 codes (International Classification of Diseases)

When you open the Entry form for ICD-10 and procedure codes, you directly see all the ICD-10 codes related to the patient's anaesthesia record.
If several ICD-10 codes are assigned to the same item, you will need to select the one(s) you want in the **Select the ICD-10 code(s) associated with the entry** window. Once the code(s) have been selected, you will no longer need to select it/them again if the **Entry form for ICD-10 and procedure codes** is displayed again. You can add new codes or change existing codes using the buttons provided, but you cannot change a code that has been entered by another user.

NB: If you hover the mouse over any ICD-10 code this displays a tooltip indicating the ICD-10 code, the ICD-10 type, the Entry type, the Description (comment) and the Official wording of the item that generated this code (if there is one).

The **Add a new code** and **Edit current code** buttons display the **ICD-10 coding help** window.



There are three different ways to enter the International Classification of Diseases code.

If you know the International Classification of Diseases code for the selected item:
In the **Manual entry** area at the top of the **ICD-10 coding help** window, enter the letter corresponding to the **Chapter**, the number corresponding to the **Category** and then the numbers corresponding to the **Subcategory and subdivision**. You can insert an **Associated comment**.
The **Entry by section** area is completed as you enter your code. Then click on the **Save** button.
NB: If the ICD-10 code you have entered is unknown, you can manually edit the Type, i.e. specify whether it is a Principal diagnosis, a Significant secondary diagnosis, an Informational secondary diagnosis or Related diagnosis.

If you know the International Classification of Diseases code sections for the selected item:
In the **Entry by section** area, located in the middle of the **ICD-10 coding help** window, select in turn, using the drop-down lists, the **Chapter**, **Category**, **Subcategory**, **Subdivision** and, if necessary, **Extension** and **Extension 2**.
The **Manual entry** area is completed as you enter the various sections of your ICD-10 code. Then click on the **Save** button.

You are looking for the International Classification of Diseases code using a keyword:
In the **Search code by keyword** area at the bottom of the **ICD-10 coding help** window, enter the keywords corresponding to the item you wish to code. You can use an entire expression as a keyword by placing it between ‘ ’. Using the drop-down list, specify that you want to search for **All words** or **At least one of the words**, then click on the **Search for corresponding ICD-10** codes button or hit **`Enter`** on your keyboard
All the possible wordings are found in the **Result(s)** box. Simply choose the one you want and the **Manual entry** and **Entry by section** boxes are automatically completed based on the wording selected. Then click on the **Save** button.

ICD-10 codes can have three statuses:

- Extracted: only **Extracted by** and **On** columns are filled.
- Confirmed: the **Confirmed by** and **On** columns are filled in addition to the **Extracted by** column.
- Exported: this new status is defined by the new **Exported by** and **On** columns. These columns make it possible to monitor data sent to the interface and are filled once the ICD-10 codes have been exported. This status is in the ICD-10 code look-up table.

6.3.2 Data export

You can untick the checkbox next to the code number to ignore it during the export.
The **View non-enabled codes** checkbox lets you display or not display in the Entry form any codes that have been unticked.
Once you have confirmed the ICD-10 you will be able to export them. The button enabling the export is greyed out until the surgery has taken place. This button will only be accessible when the patient arrives in the recovery room.

NB: Code confirmation is irreversible and no subsequent changes are possible. Once the codes are exported, they cannot be changed. In addition, these codes can only be exported after the surgery has been done.

6.4 Printing ICD-10 codes

The ICD-10 codes are printed in landscape mode for the two types of printouts available:

- ICD-10 codes
- Detailed ICD-10 codes

7. Glossary

AROM: Artificial rupture of membranes
BMI: Body mass index
BSA: Body surface area
Cath: Catheter
CCU: Continuous care unit
CRL: Crown-rump length
D: Day
DDB: Drug database
DR: Delivery room
DVE: Digital vaginal examination
EAB: Elective abortion
ECG: Electrocardiogram
EHR: Electronic health record
EONI: Early-onset neonatal infection
EP: Ectopic pregnancy
HC: Head circumference
HIS: Hospital information system
HR: Heart rate
HT: Hypertension
Hx.: History
IAS: Irregular antibody screening
INN: International nonproprietary name
IPSSV/PEEP: Inspiratory pressure support during spontaneous ventilation and positive end-expiratory pressure
IUD: Intrauterine device
IUFD: Intrauterine foetal demise
IV: Intravenous
LM: Late miscarriage
LMP: Last menstrual period
MC: Miscarriage
MDRO: Multidrug-resistant organism
MW: Midwife
NTR: Nothing to report
NVR: Normal variability and reactivity
OC: Oral contraceptive
PAO: Prophylactic Administration of Oxytocin
PAO: Prophylactic Administration of Oxytocin
PBP: Preparation for birth and parenthood
PPH: Postpartum haemorrhage
Preop: Preoperative assessment
PSD: Pregnancy start date
RCT: Reference centre for teratogens
RNA: Registered nurse anaesthetist
RPB: Risk of premature birth
sMC: Spontaneous miscarriage
SP: Syringe pump
SR: Surgery report
SRM: Spontaneous rupture of membranes
TAB: Therapeutic abortion
TASO: Time amniotic sac open
TT: Treatment

VAS: Visual analogue scale
WA: Weeks of amenorrhea
WTD: What to do
XDRB: Extensively drug-resistant bacteria

BOW MEDICAL, 43 Avenue d'Italie
80090 AMIENS, France
http://www.bowmedical.com

CE The **DIANE** medication order engine is a class I medical device.

Users should read all instructions carefully to ensure that the medical software is used properly.

Last revised on June 3, 2020