Open Hospital 1.12.1 - User's Guide

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Open Hospital

1 Introduction

OH - Open Hospital (https://www.open-hospital.org/) is a free and open-source Electronic Health Record (EHR) software application. Open Hospital is deployed as a desktop application that can be used in a standalone, single user mode (PORTABLE mode) or in a client / server network configuration (CLIENT mode), where multiple clients and users connect to the same database server.

Open Hospital is developed in Java and it is based on open-source tools and libraries; it runs on any computer, requires low resources and is designed to work without an internet connection.

Open Hospital is the first of a set of software applications that ISF^[1] has developed to support the information management and the activities of hospitals and health centers in the simplest manner possible, by providing tools for the administrative operations (like registering patients, and managing laboratory analysis and pharmaceutical stocks) and for the production of detailed statistics and reports. It was first deployed in 2006 at the St. Luke Hospital in Angal (Uganda) and it is now used in dozens of different locations around the world.

1.1 Main Features

OH - Open Hospital features include:

- Pharmacy management
- Laboratory management
- OPD management
- Patient admission and discharge management
- Pregnancy management
- Malnutrition control management
- Vaccines database
- Patient billing support
- Therapy management
- Appointment scheduling
- Internal communication
- Statistics and printing

1.2 About this User Manual

In the following chapters, all the information needed to correctly and efficiently use the OH software is presented. More information can be found on the Open Hospital web site: https://www.open-hospital.org.



The information needed to install, configure or administer Open Hospital is not included in this manual; please refer to the *Open Hospital Administrator's Guide* supplied with the software.

1.2.1 Help

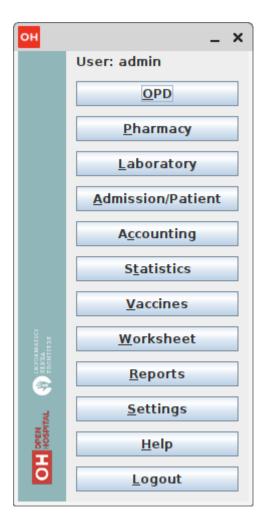
• The **Help** function available at the bottom of the main MENU of Open Hospital provides access to this document <u>offline</u>.

1.2.2 Legend

In this document, the following conventions are used:

- When a text is written in bold and highlighted in grey like **<u>Pharmacy</u>** or <u>**New**</u> it indicates a function of the application and it is also called a "button". **<u>Pharmacy</u>** is a button.
- When a text is written in bold Italic (as an example, *Laboratory Browser*), it indicates the screen with the name "Laboratory Browser" (see example below). Each screen of the application is called a window. *Laboratory Browser* is a window.
- When a text is written in bold as **Search patient visits**, it indicates a function of the application, or an area of the window (for example, **Data table**).
- Each button always has a single letter with an underscore. The functionality offered by the button is made available by simultaneously pressing the "Alt" key and the "underlined" key (in the example of **Pharmacy**, press "Alt" and "P"). This behavior is common throughout the application and allows the user to operate (almost) without the use of the mouse. In this document, the "Alt" key and the "P" key will be indicated as "Alt + P".

Click with the mouse on the button or press "Alt + P" to enter the **Pharmacy**



• Each screen of the application is a called "window". Most complex windows of the application are composed of more than one area. Areas can be a **Selection panel**, a **Data table**, or a **Buttons panel** (see *Laboratory Browser* window below).

~		Laboratory Bro	owser	window.	-		
Select an exam	DATE	PATIENT		EXAM	RESULT		
	15/03/2021 19:41:32	Jeffreys Risa	3.1 Blood Slide (Malaria)		NEGATIVE		
ui 🗸	15/03/2021 19:41:32	Jeffreys Risa	3.2 Blood Slide (OTHERS, E	E.G. TRIUPHANOSOMIAS, MICRIFI	NEGATIVE		
	15/03/2021 14:35:46	Depuy Darrell	7.3.3 GOT		<= 50 (NORMAL)		
Date From: 27/04/2000	15/03/2021 14:35:46	Depuy Darrell	7.3.4 ALT/GPT		> 50		
	15/03/2021 14:35:26	Curtis Courson	8.1 OCCULT BLOOD		NEGATIVE		
Date To: 04/05/2022 🛅	15/03/2021 14:35:09	Nieves Julietta	3.1 Blood Slide (Malaria)		NEGATIVE		
	15/03/2021 14:35:09	Nieves Julietta	3.21 Trypanosomiasis	Area where data are	NEGATIVE		
Search	15/03/2021 14:35:09	Nieves Julietta	3.6 CSF WET PREP	displayed is called the	NEGATIVE		
	15/03/2021 12:32:17	Sara Hucklington	5.4 LEISMANIA	"Data table".	NEGATIVE		
	15/03/2021 12:32:17	Sara Hucklington	7.4.1 CREATININA		1.4 - 2.5		
٨	15/03/2021 12:16:50	Eddings Carmine	1.5 ESR		NORMAL		
	13/03/2021 22:47:53	Geremia Dickinson	2.1 Grouping		AB RH+		
	13/03/2021 22:47:53	Geremia Dickinson	7.4.1 CREATININA		< 1.4 (NORMAL)		
	13/03/2021 01:17:47	Kenty Willis	3.1 Blood Slide (Malaria)		NEGATIVE		
	13/03/2021 01:17:47	Kenty Willis	4.6 OTHER C&S		NEGATIVE		
	13/03/2021 00:54:26	Bumpers Ferdinand	2.2 Comb's Test		NEGATIVE		
$\overline{}$	13/03/2021 00:54:26	Bumpers Ferdinand	3.1 Blood Slide (Malaria)		NEGATIVE		
Area where you can	13/03/2021 00:50:42	Mary Garrington	URINALYSIS		Multiple results		
	23/11/2020 16:02:33	Quinlan Coors	7.1 PROTEIN		NEGATIVE		
apply search	23/11/2020 16:02:33	Quinlan Coors	7.2 SUGAR		NORMAL		
criteria is called the	21/11/2020 22:40:40	Hobert Kittelson	1.4 Film Comment		0		
"Selection panel".	21/11/2020 22:40:40	Hobert Kittelson	1.6 Sickling Test		NEGATIVE		
	21/11/2020 22:40:40	Hobert Kittelson		/ITY (C&S) FOR HAEMOPHILUS I	POSITIVE		
	21/11/2020 22:40:18	Janusz Lavera	1.4 Film Comment		0		
	21/11/2020 22:08:31	Vincent Arata	4.6 OTHER C&S		NEGATIVE		
	21/11/2020 22:08:31	Vincent Arata	5.4 LEISMANIA		NEGATIVE		
	21/11/2020 22:08:31	Vincent Arata	6.4 HEPATITIS		NEGATIVE		
	21/11/2020 02:23:20	Genna Susterlind	6.4 HEPATITIS		NEGATIVE		
	21/11/2020 02:23:20	Genna Susterlind	6.5 OTHERS E.G BRUCELLA	, RHEUMATOID FACTOR, WEIL FE	NEGATIVE		
	21/11/2020 01:52:02	Jestine Dacruz	5.5 ZN		NEGATIVE		
	21/11/2020 01:47:45	Stanton Durrah	7.4.1 CREATININA		< 1.4 (NORMAL)		
	21/11/2020 01:47:45	Stanton Durrah	7.4.2 UREA		10-55 (NORMAL)		
	21/11/2020 01:41:32	Shannan Matias	6.2 TPHA		POSITIVE		
	21/11/2020 01:41:18	Eddy Rambin	7.4.1 CREATININA				
	21/11/2020 01-/11-08	lazmine Guun	3.1 Blood Slide (Malaria)		ou can choose the function		
		<u>N</u> ew <u>E</u> dit <u>D</u> elete <u>P</u> rint	Table Print <u>L</u> abel <u>C</u> lose	to be applied is	called the "Button panel".		

• To highlight an entry (for example, a single line in a **Data table**), click the mouse on the entry. The entry (the entire line) is then highlighted in blue. This behavior is valid throughout the application (see example below):

~		Pharm				- 0	
TYPE	CODE	DESCRIPTION		PcsXPck	STOCK	CRIT. LEVEL	OUT OF STOCK
Laboratory		4 Dimethyl Aminobenzaldelyde		0	0	0	V
Drugs		Acetazolamide 250mg Tab		0	0	0	v
Laboratory		Acetic Acid Glacial 1 ltr		0	0	0	V
Laboratory		Aceton 99% 1ltr		0	0	0	V
Drugs		Aciclovir cream		0	320	2	
Drugs		Acyclovir 200mg Tab	<u> </u>	0	1,210	0	
Surgery		Adhesive Tape 2.5cm x 5m		0	20	0	
Surgery		Adhesive Tape 7.5cm x 5m		0	0	0	V
Drugs		Adrenaline 1mg/ml 1ml Amp		0	0	0	~
Surgery		Air ring set 43x15cm, rubber with pump	Entry (line) is highlighte	d. 0	0	0	V
Surgery		Airway Guedel Size 0	, , , , , , , , , , , , , , , , , , , ,	0	0	0	V
iurgery		Airway Guedel Size 00		0	0	0	~
Surgery		Airway Guedel Size 1		0	0	0	V
Surgery		Airway Guedel Size 2		0	0	0	V
Surgery		Airway Guedel Size 3		0	0	0	2
Drugs		Albendazole 200mg Tab		0	37,200	450	
Drugs		Albendazole 400mg Tab		0	0	0	~
Drugs		Aminophyline 25mg/ml,10ml Amp		0	190	0	
Drugs		Aminophylline 100mg Tab		0	8,981	0	
Drugs		Amitriptyline 25mg Tab		0	5,600	0	
aboratory		Amonium Oxalate		0	0	0	v
Drugs		Amoxycillin /Clavulanate 375mg Tab		0	0	0	V
Drugs		Amoxycillin 125mg/5ml Powd. Susp 100ml		0	180	0	
Drugs		Amoxycillin 250mg Caps		0	56,080	0	
Drugs		Amphotericin B 50mg Vial		0	0	0	~
rugs		Ampicillin 500mg Vial		0	650	0	
Chemical		Anti Serum A 10ml		0	0	0	V
Select type ALL	-	New Edit	Delete Export S	tock Stock	ard Order	Expiring	AMC Close

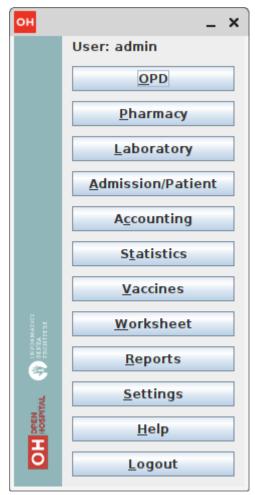
2 Start the OH Application

To run Open Hospital, double-click the program icon on the desktop; an information image (splash image) appears for a few seconds and then the main *menu* of the OH application is shown.

If no desktop shortcut is present, open the folder where the software has been installed and doubleclick on the platform-specific startup script (**oh.bat** on Windows / **oh.sh** on Linux).

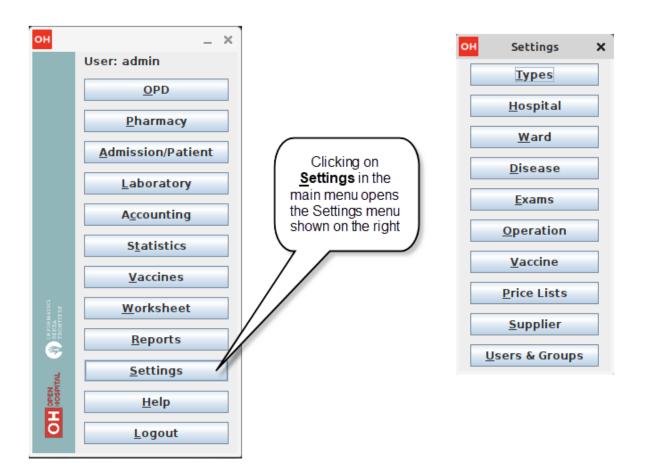
2.1 Main menu

The default Main Menu of the OH application shows the available functions.

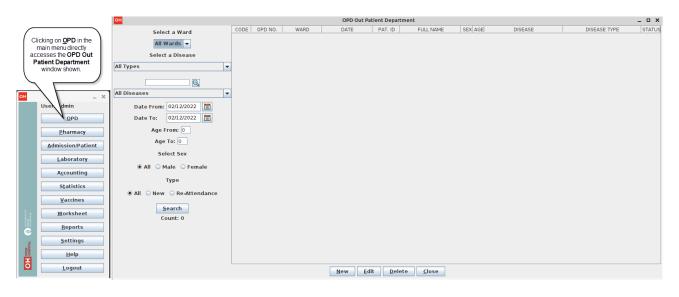


2.2 Functions

From the main menu, it is possible to access functions and submenus. In the example below, selecting the *Settings* button leads to the OH settings submenu:



Some menu items lead directly to a specific function of the application (see the following example with the *OPD Out Patient Department* window):



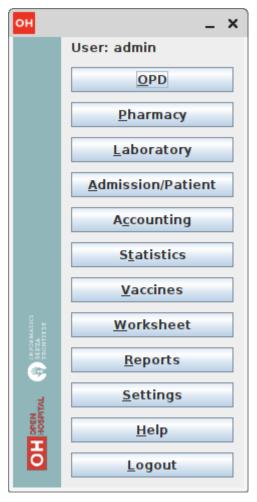
3 Outpatient Department Management (<u>O</u>PD)

3.1 Main Characteristics

The function of the Out Patient Department (OPD) allows the recording of ambulatory patient visits, searching, reviewing, editing, and eventually deleting visits. In addition, queries necessary for statistical purposes are available.

Click on the **OPD** button or press "Alt + O" in the main **menu** to access the OPD function.

Press the **OPD** button or "Alt + O".



3.2 Functions of Out Patient Department

All functions available under **OPD** are accessible from the window **OPD Out Patient Department**, shown below:

OPD Out Patient Department										- 🗆 ×
Search by Code (press ENTER)	CODE	OPD NO.	WARD	DATE	PAT. ID	FULL NAME	SEX AGE	DISEASE	DISEASE TYPE	STATUS USER
Code OPD No. Pat. ID										
Other Filters										
All Wards										
All Disease Types 💌										
Search Disease:										
All Diseases										
All Male Female Female All All										
Date From: 30/01/2023										
Date To: 30/01/2023										
Age From: 0										
Age To: 0										
Patient Type: All New Re-Attendance										
🔾 My Patients 🔘 All										
Search Reset										
	1			New	<u>E</u> dit <u>D</u> ele	te <u>C</u> lose				

The following functions are available from the **Buttons panel** of the window **OPD Out Patient Department**:

- <u>N</u>ew: create a new patient visit.
- Edit: modify an existing patient visit.
- **<u>D</u>elete**: delete a patient visit.
- <u>Close</u>: exit from the OPD Out Patient Department function.

Furthermore, a search function (**Search**) is available using the **Selection panel** on the left side of the window.

3.2.1 Search Patient Visits (Search)

Queries about ambulatory patient visits can be done using the search criteria available on the **Selection panel** area of the window (on the left side of the window).

The following fields are available to select or narrow the resulting matches:

- Search by code (only one can be used at a time)
 - Code: Search an OPD visit by its code. Each code is unique, so only ONE result is expected
 - **OPD No.**: Search OPD visits by their Progressive in Year. This starts every year from 1, so one or more results are expected
 - Pat. Id: Search OPD visits by Patient ID. One or more results are expected



to apply the above **Exclusive Filters** one has to just type a *number* and press *ENTER*.

- Other filters (they are all applied when pressing <u>Search</u>)
 - Ward: Select a specific OPD ward
 - Disease type: Select a specific disease type or all disease types

- **Disease**: Select either a specific disease or all diseases, or search using partial matches by typing some letters in the search field
- $\circ~$ Sex: Select patients by sex: All / Male / Female
- **Date**: "Date From" and "Date To" to select all visits occurring during the specified period
- $\circ~$ Age: "Age From" and "Age To" to select patients by age
- Type of patient: Select visits by type of attendance: All / New / Re-Attendance
- **User**: Select visits by doctor (USER column): only visits inserted by the logged user (me) or All

After specifying the selection criteria, press the **Search** button. The counter at the bottom of the window indicates how many visits match the specified criteria, and the individual visit data is shown in the **Data table** area. The **Reset** button blanks all filters to default values.

The example below shows all the visits for patients with *asthma* disease admitted in the period from 29-5-2020 until 5-6-2021; all ages, all sexes, and all patient types are included.

OPD Out Pa	atient Department										1	- 0	×
Conrob by C	ode (press ENTER)		CODE	OPD NO.	WARD	DATE	PAT. ID	FULL NAME	SEX A	E DISEASE	DISEASE TYPE	STATU	IS USE
			400	392	OPD	23/11/2020 16:00	470	Leddy Everette	M 4	Asthma	4 NON-COMMUNICABLE DISEAS	ES New	admir
Code	OPD No.	Pat. ID	356	348	OPD	03/11/2020 18:23	448	Jurgensen Fritz	M :	Asthma	4 NON-COMMUNICABLE DISEAS	ES New	admir
			348	340	OPD	03/11/2020 18:15	443	Abboud Jeanene	F	Asthma	4 NON-COMMUNICABLE DISEAS		admir
			257	250	OPD	03/11/2020 16:51		Fredrickson Denna	M 1	1 Asthma	4 NON-COMMUNICABLE DISEAS		admi
Other Filters			207	200	OPD	03/11/2020 16:09	194	Scheff Benjamin	M 1	4 Asthma	4 NON-COMMUNICABLE DISEAS		admi
All Wards		-	168	161	OPD	03/11/2020 09:24		Nicolai Adan	M 7	5 Asthma	4 NON-COMMUNICABLE DISEAS		adm
All wards		· · · · · · · · · · · · · · · · · · ·	158	151	OPD	02/11/2020 09:14		Reardon Mora	F 2	3 Asthma	4 NON-COMMUNICABLE DISEAS		
All Disease	Types	-	100	94	OPD	02/11/2020 20:54		Molly Rod	F 1	9 Asthma	4 NON-COMMUNICABLE DISEAS		
ui Discuse	(Jhea		41	38	OPD	02/11/2020 19:45	108	Ivery Hyman	F 4	0 Asthma	4 NON-COMMUNICABLE DISEAS		
Search Dis	ease:		22	20	OPD	02/11/2020 19:14	85	Threadgill Mack	F 6) Asthma	4 NON-COMMUNICABLE DISEAS		
			3	2	OPD	02/11/2020 16:57	51	Abramo Oliver	M 7	0 Asthma	NON-COMMUNICABLE DISEAS	ES Re-Att	. adm
Asthma													
Anaemia		<u> </u>							-		-		
Animal/snai	ke bite												
Anxiety disc	orders	н											
Asthma		_											
Benine neo	plasm"s (all type)												
Cancer of th													
	d other skin cancers												
Cardiac arr		-											
cardiac arr	Age To: 0	•											
	Age to: U												
Patient Typ	pe: 🖲 All 🔾 New	Re-Attendance											
	O My Patients (All											
			-										
	Search Re	eset											
	Count: 11												
						New	Edit	elete Close					

3.2.2 Create a New Patient Visit (New)

Press the <u>New</u> button in the *OPD Out Patient Department* window to access the *New OPD Registration* window, shown below.

OH New OPD Registration		×
New Attendance Referral Referred To		
Attendance Date		
29/11/2022		
Disease Type		
All Types	-	
Diagnosis		
	-	
Diagnosis n.2 (full list)		
	-	
Diagnosis n.3 (full list)		
	-	
Age:		
Sex: 🖲 Male 🔾 Female		
<u>O</u> K <u>C</u> ancel		

To record a visit, enter data into the following fields:

• **Type of attendance**: This field is not meant to distinguish whether or not an individual is new in the ambulatory (that is, whether this is the absolute first time they have entered the ambulatory). The NEW ATTENDANCE selection indicates whether the patient comes to the ambulatory to report a new health issue or new disease for which no care has been previously addressed or recorded. This could be their initial visit or their n-th time in the ambulatory; it does not matter with regards to this field. If this visit is for an issue or disease previously addressed, the field is not selected and records are created for the patient with regards to the follow-up care and instructions for recovery.

Example: A patient comes to the ambulatory because they report a cut; this event is recorded as NEW ATTENDANCE. The doctor sutures the wound, and invites the patient to come back ten days later. When the same patient comes back after ten days to have his/her stitches removed, a new OPD record is created, without the NEW ATTENDANCE flag set.

- Attendance Date: The date on which the patient is seen for the recorded activity.
- **Disease Type**: By selecting a *Disease Type*, the first diagnosis list will contain only related diseases. The second and third list continues to contain all diseases.



Disease Types are defined by the Administrator. Ask the Administrator or check the Settings chapter.

• **Diagnosis**: A maximum of three diseases can be diagnosed per attendance ("new attendance" or "re-attendance" does not matter in this context). Normally, the patient reports at least one visit reason, but it may happen that during the same visit, the doctor finds other concurrent pathologies. Thus it is possible to record up to a maximum of three (the first being the only one mandatory) diagnoses.

It is possible to use filters to find diseases more easily. To do so, enter a text fragment in the search field that is part of the disease name. The closer the search text comes to the name of the

disease being searched, the more precise the search is.

Example: In the OPD Out Patient Department window, only the first diagnosis and its type are shown, but all the corresponding data is stored and available in reports and for searching.

- Age: The patient's age; the valid age range is 0-120.
- Sex: The patient's sex; either male or female.

When finished entering data, the **Buttons panel** has the following choices:

- **OK**: confirm and record the patient's visit.
- **Cancel**: close the window and return to the **OPD Out Patient Department** window.

3.2.3 Modify a Recorded Patient Visit (Edit)

In order to modify a visit, first highlight it in the *OPD Out Patient Department* window. Once the visit has been highlighted, press the <u>Edit</u> button. When the *Edit OPD Registration* window is shown, all the data can be changed or modified.

он New OPD Registration	×
🗹 New Attendance 📃 Referral 📃 Referred To	
Attendance Date	
29/11/2020 🛅 14:56 +	
Disease Type	
2.OTHER INFECTIOUS/COMMUNICABLE DISEASES	
Diagnosis 🦲	
Eye Infection 💌	
Diagnosis n.2 (full list)	
▼	
Diagnosis n.3 (full list)	
▼	
Age: 68	
Sex: 🖲 Male 🔾 Female	
<u>O</u> K <u>C</u> ancel	

Once the data have been inserted, the **Buttons panel** shows the following choices:

- **O**K: confirm new values (all the previous values will be lost).
- <u>Cancel</u>: close the window and return to the *OPD Out Patient Department* window without applying any changes.

3.2.4 Delete a Recorded Patient Visit (Delete)

In order to delete a visit, first highlight it in the *OPD Out Patient Department* window. Once the visit has been highlighted, press the **Delete** button. The highlighted record is shown in a confirmation dialog: now the record can be deleted. Deleted records are no longer available.



The **Buttons panel** shows the following choices:

- **<u>Y</u>es**: confirm the deletion of the visit.
- <u>No</u>: close the window and return to the *OPD Out Patient Department* window without deleting the visit.

3.3 OPD Extended

The OPD functionality can be extended by changing the *OPDEXTENDED* flag in the configuration file. Ask the Administrator or refer to the *Administrator's Guide*.

3.3.1 Additional Features

Press the <u>New</u> button in the *OPD Out Patient Department* window to access the *New OPD Registration* window, shown below.

Mew OPD Registration			-	×
🔓 🔾 Re-Attendance 🔍 New Attendance 📃 Referral 🔲 Referred To				
Attendance Date 30/01/2023 🛐 22:19 1 OPD No. 1 OPD Ward OPD	- 8	Notes & Symptoms		-
Search 3 tamie Q. Johanson Tamie	- V			
Disease Type All Types	-			
Diagnosis	-			
Diagnosis n.2 (full list)	-			
Diagnosis n.3 (full list)	-			
LAST OPD VISIT on 03/11/2020 16:02 - Liver cirrhosis				
Note <none></none>				
Next visit date 🔲 🐨 Ward OPD 🔽 🗔 7				
Patient Operation 5				
Patient (code: 487)				
First Name Johanson	-			
Last Name Tamie				
Address Guicon St.				
City Butte Town				
Age 3y 7m 15d				
Sex O Male				
	-			
				-
<u>Q</u> K Ana <u>m</u> nesis <u>E</u> xamination <u>C</u> ancel				

The OPD Extended module affords the following additional features:

- Calendar (1): to choose the visit date
- OPD number (2): the progressive number per year automatically set by the system; changes to the value can be made only at the first registration in a year, and then it will be increased automatically at each registration. The OPD number **MUST** be unique for each year.
- Registered Patient (3): before choosing a disease, first select a patient from the drop-down list (this is **required**); to find a patient, use the nearby search field by typing part of the patient's name or code. This improves the reliability of reports and statistics, and is a service to the patient as it accounts for the patient's history.
- Radio box (5): to distinguish whether an individual is new (New Attendance) or a (Re-Attendance) in the ambulatory. The New Attendance selection indicates that the patient came to the ambulatory to report a new health issue or new disease for which no care has been previously provided and/or addressed. This could be their initial visit or their n-th time in the ambulatory; it does not matter for this selection. The important criteria for selecting New Attendance is that the problem under consideration is a new issue; that is, one that has not been dealt with previously. For an issue or disease previously dealt with but not completely addressed (that is, completely cured or healed), Re-Attendance is selected and records are created for the patient in regard to the follow-up care and instructions for recovery. Any other follow-up visits for the same issue are also marked as Re-Attendance.

Example: A patient comes to the ambulatory because they report a cut; this event is recorded as a *New Attendance*. The doctor sutures the wound, and invites the patient to come back in ten days. When the same patient comes back after ten days to have his/her stitches removed, a new OPD record is created with the *Re-Attendance* flag set, as this visit is a continuation of the previous visit and medical problem.

- Once a patient is selected and if a previous OPD visit is found, special fields are populated with the most recent visit of the patient (4), his/her personal data (5), and the **Re-Attendance** radio box will be selected automatically upon selection of the main (first) disease (6);
- It is now possible to set the next appointment date (7) and in what ward (OPD or IPD). This automatically schedules a visit visible in Therapy Management and Worksheet.
- Selecting the trash can icon (9) clears the next visit information (date, time and ward) and deletes the appointment if previously specified.
- The selection of the OPD ward (8) is required so as to specify where the visit is taking place. After the first selection in a session, the application remembers the selection to ease the data entry.
- If a new attendance for this patient is required, click the "New Attendance" (6) radio box and proceed normally.
- If editing an old OPD, it is possible to change everything except the patient to whom the OPD refers, and the "New Attendance" radio box.
- In the event that the selected patient personal data need to be updated, it is possible to click on the Edit icon 📝 near his/her name; a new window shows the patient personal information ready for modification.
- In the event that the patient is not yet registered, the *new patient* entry can be selected to register a new patient; after registration, the program returns to the OPD window and the new patient is selected.
- If the user is enabled by the Administrator (see Users & Groups), the following is shown:
 - the **Examination** button function (see Patient examination)
 - the **Operation** tab after the patient's tab (5) to record small surgeries and other interventions (see Operations) as well as in Admission (see Insert or Modify Surgery Data).



For OPD and IPD wards, see Ward settings.

4 Pharmacy (Pharmacy)

Pressing **Pharmacy** from the main menu provides access to the Pharmacy menu. From the Pharmacy menu, the following functions are available: **Pharmaceuticals**, **Pharmaceuticals Stock**, and **Pharmaceuticals Stock Ward**.

×

Submenu: Press the **Pharmacy** button or "Alt + P" to open the Pharmacy submenu



G

Pharmaceuticals Stock Ward functionality can be disabled by changing the INTERNALPHARMACIES flag in the configuration file. Ask the Administrator or refer to the *Administrator's Guide*.

4.1 Pharmaceuticals (Pharmaceuticals)

4.1.1 Main Characteristics

Pharmaceutical functions allow for the insertion, modification, and deletion of pharmaceuticals. Moreover, it provides important information about pharmaceuticals:

- the current quantity lying in the stock
- the limit quantity that defines when a pharmaceutical is going out of stock
- if the pharmaceutical is out of stock

• the drugs expiring today or within a specified time period



In Open Hospital, to identify pharmaceuticals, sometimes the word, "pharmaceutical" is used and sometimes the synonym "medical" is used.

4.1.2 Functions of Pharmaceuticals

To access the functions of Pharmaceuticals, press **<u>P</u>harmaceuticals** in the Pharmacy menu.

All functions available under Pharmaceuticals are accessible from the *Pharmaceutical Browser* window, shown below. It displays all the pharmaceuticals available in the hospital.

TYPE	CODE	DESCRIPTION	PcsXPck	STOCK	CRIT. LEVEL	OUT OF STOCK	
Laboratory		4 Dimethyl Aminobenzaldelyde	0	3	5		_
Drugs		Acetazolamide 250mg Tab	0	0	0	~	
Laboratory		Acetic Acid Glacial 1 Itr	0	0	0	~	_
Laboratory		Aceton 99% 1ltr	0	0	0	2	
Drugs		Aciclovir cream	0	320	2		
Drugs		Acyclovir 200mg Tab	0	1,210	0		_
Surgery		Adhesive Tape 2.5cm x 5m	0	20	0		
Surgery		Adhesive Tape 7.5cm x 5m	0	0	0	~	
Drugs		Adrenaline 1mg/ml 1ml Amp	0	0	0	v	_
Surgery		Air ring set 43x15cm, rubber with pump	0	0	0	~	
Surgery		Airway Guedel Size 0	0	0	0	~	
Surgery		Airway Guedel Size 00	0	0	0	~	_
Surgery		Airway Guedel Size 1	0	0	0	~	_
Surgery		Airway Guedel Size 2	0	0	0	2	
Surgery		Airway Guedel Size 3	0	0	0	~	
Drugs		Albendazole 200mg Tab	0	37,200	450		_
Drugs		Albendazole 400mg Tab	0	0	0	2	
Drugs		Aminophyline 25mg/ml,10ml Amp	0	190	0		
Drugs		Aminophylline 100mg Tab	0	8,981	0		_
Drugs		Amitriptyline 25mg Tab	0	5,600	0		
Laboratory		Amonium Oxalate	0	0	0	~	
Drugs		Amoxycillin /Clavulanate 375mg Tab	0	0	0	v	
Drugs		Amoxycillin 125mg/5ml Powd. Susp 100ml	0	180	0		
Drugs		Amoxycillin 250mg Caps	0	56,080	0		
Drugs		Amphotericin B 50mg Vial	0	0	0	~	_
Drugs		Ampicillin 500mg Vial	0	650	0		
Chemical		Anti Serum A 10ml	0	0	0	2	

If the pharmaceutical quantity is under the critical level, it is shown in RED.

If the pharmaceutical quantity is zero, it is shown in GRAY and the square in the last column is checked.

The following functions are accessible from the **Buttons panel** of the **Pharmaceutical Browser** window:

- **<u>N</u>ew**: register a new pharmaceutical.
- Edit: modify a registered pharmaceutical.
- **<u>D</u>elete**: delete a pharmaceutical.
- **Export**: export the pharmaceuticals to a CSV file (Excel).
- **<u>S</u>tock**: show the report of stock quantities.
- **StockCard**: show the history of the movement of a certain pharmaceutical (must be selected in the list first).
- **Order**: show the list of pharmaceuticals that have to be ordered.
- **Expiring**: show the list of pharmaceuticals that are going to expire (today, next month, within two months, within three months, or within another month to be specified).
- AMC: show the AMC (average monthly consumption) of pharmaceuticals.
- <u>Close</u>: exit from the **Pharmaceuticals Browser**.

At the bottom left of the window, there is a "Select type" combo box. Based on the value selected, the table either displays a pharmaceutical of a specific type or all pharmaceuticals if the default value of ALL is used. Just to the right of the combo box is a field that is used to search for a specific pharmaceutical by description by typing a keyword into the field.

It is possible to sort the table by any of the column headers by double-clicking on the column name. Filtered type (combo box), searched keys (the search field) and sorting are all reflected in the STOCK report.

4.1.2.1 Insert a New Pharmaceutical (New)

Press the <u>New</u> button in the *Pharmaceutical Browser* window to access the *New Medical* window, shown below.

To insert a new pharmaceutical, enter the following fields:

- **Type**: for example, Drugs or Chemical
- Code: code that uniquely identifies the pharmaceutical for fast searching.
- **Description**: the description of the pharmaceutical.
- Pieces per Packet: number of pieces per packet (if more than 1).
- Critical level: the minimum quantity required in stock.



Types can be defined by the Administrator. Check the <u>Settings</u> chapter for more information.

~	New Medical	8
Туре:	Chemical	-
Code:		
Description:		
Pieces per Packet:	1	
Critical level:	0.0	
	<u>O</u> K <u>C</u> ancel	

When all the data is entered, the **Buttons panel** has the following choices:

- **O**K: confirm and save the data.
- **<u>C</u>ancel**: close the window and return to the **Pharmaceutical Browser** window.

4.1.2.2 Modify an Existing Pharmaceutical (Edit)

After selecting the pharmaceutical to modify, press the **<u>E</u>dit** button in the *Pharmaceutical Browser* window to access the *Edit Medical* window, shown below. All the data except for the "Type" value can be modified or changed.

~	Edit Medical	8
Туре:	Drugs	-
Code:	44	
Description:	Atropine 1mg/ml 1ml Amp	
Pieces per Packet:	0	
Critical level:	0.0	
	<u>O</u> K <u>C</u> ancel	

When all the data is entered, the **Buttons panel** has the following choices:

- **<u>O</u>K**: confirm and save the data.
- **Cancel**: close the window and return to the **Pharmaceutical Browser** window.

4.1.2.3 Delete a Pharmaceutical (Delete)

To delete a pharmaceutical, highlight it in the Browser window as before. Next, press the **Delete** button and a confirmation dialog is shown:

~	Question	3
?	Delete medical: Acyclovir 200mg Tab	?
	Yes No	

The **Buttons panel** has the following choices:

- **Yes**: confirm the deletion of the pharmaceutical.
- No: close the window and return to the *Pharmaceutical Browser* window.

4.1.2.4 Export the List of Pharmaceuticals (Export)

Use this function to export the list of pharmaceuticals shown in the *Pharmaceutical Browser* window that then can be imported into Excel.

Press the **Export** button in the **Pharmaceutical Browser** window to access the **Save** window, shown below. The window uses the language of the computer, regardless of the language used in Open Hospital.

This begins the exporting of the list of pharmaceuticals.

In the *Save* window:

- select the directory of the file system where the data is to be stored
- input the name for the file (Filename)

~		Save	8
Save <u>I</u> n: 🗖 D	ocuments		• A A C 80 5
File <u>N</u> ame:	Stock		
Files of <u>T</u> ype:	Excel (*.xlsx)		-
			Save Cancel

4.1.2.5 Stock Report (Stock)

Press the **<u>Stock</u>** button in the **Pharmaceutical Browser** window to produce the report of pharmaceuticals in the stock, grouped by *IN STOCK* and *OUT OF STOCK*.

4.1.2.6 Stoc<u>k</u>Card (Stoc<u>k</u>Card)

Press the **Stoc<u>k</u>Card** button in the *Pharmaceutical Browser* window to show the history of movement for a selected pharmaceutical for a specific time range. The data can either be in report format or exported to a CSV file.

4.1.2.7 Order of Pharmaceuticals (Order)

Press the **Order** button in the **Pharmaceutical Browser** window to produce the list of pharmaceuticals remaining in stock and the ones to be reordered according to their critical level.

4.1.2.8 Expiring Pharmaceuticals (Expiring)

Press the **Expiring** button in the *Pharmaceutical Browser* window to produce the list of pharmaceuticals that are going to expire, grouped by type and lot.

4.1.2.9 Average Monthly Consumption (AMC)

Press the **AMC** button in the *Pharmaceutical Browser* window to produce a report showing the average monthly consumption of pharmaceuticals.

4.2 Pharmaceutical Stock (Pharmaceutical Stock)

4.2.1 Main Characteristics

The Pharmaceutical Stock feature is used to store and trace every stock movement that has been made. Every movement is identified by the following data:

• date of the movement

- type of the movement, that is, if it is a charging or discharging one
- the ward to which the movement refers. This feature is needed for discharging movements only. It is important to know in which ward pharmaceuticals have been used; otherwise, this field is empty
- the quantity
- the pharmaceutical (which in turn relates to different categories: Laboratory, Surgery, Drugs or Chemical)
- the lot to which the movement is referred. Some pharmaceuticals may not have a lot related (for example, 'Gloves'), so the field can be omitted. It is recommended to store even the lot (if it exists) because every lot has its own peculiarity:
 - a name (that can be its code)
 - a preparation date
 - $\circ~$ a due date

In this way, which movement that refers to the pharmaceuticals expiring can be found, or pharmaceuticals prepared on a specific date, or how many movements have been registered about that lot, and so on.

• the supplier of the pharmaceutical. This characteristic is needed for charging movements only. This field is empty in other cases.

4.2.2 Functions of Pharmaceuticals Stock

To access the functions of Pharmaceuticals, press **Pharmaceutical** <u>Stock</u> in the Pharmacy menu, shown below.

~	Pharmacy	8
	<u>P</u> harmaceuticals	
	Pharmaceutical <u>S</u> tock	
Ph	armaceutical Stock <u>W</u> ar	ď

The *Stock Movement Browser* window, shown below, is opened.

												- (
Selection Panel	REF. NO.	DATE	TYPE	WARD	QTY	PHARMACEUTICAL	MED TYPE	LOT	PREP DATE	DUE DATE	ORIGIN	COST	TOTAL
Pharmaceutical		15/03/2021 22:	Disch	CHILDREN WARD	20	cotton Wool 500G		714445328	15/03/2021	15/03/2021		2.000	40
Description		15/03/2021 22:	Charge		100	cotton Wool 500G		714445328	15/03/2021	15/03/2021	JMS	2.000	200
		15/03/2021 22:	Charge		20	Whitfield Oinment 200g	Drugs	730989624	15/03/2021	15/03/2021	Enterpi	8.000	160
		15/03/2021 14:	Disch	FEMALE WARD	20	Mosquito Net Impregnate	Surgery	135215806	15/03/2021	15/03/2024		30.000	600
		15/03/2021 14:	Disch	MALE WARD	40	Chlorpromazine 25mg/ml/		746001220	15/03/2021	15/03/2021		2.000	80
All		15/03/2021 14:			100			746001220	15/03/2021	15/03/2021	JMS	2.000	200
Туре		15/03/2021 14:	Charge		1000		Surgery	119075574	15/03/2021	15/03/2021	JMS	0.150	150
Type		15/03/2021 14:	Charge		10	X-Ray Film 43x35cm		593753636	15/03/2021	15/03/2021	JMS	10.000	100
All		15/03/2021 01:			10	Liquid detergent 20Ltr		255823000	15/03/2021	15/03/2021	JMS	0.500	5.
			Charge		20			367058076	15/03/2021	15/03/2021	Enterpi	2.000	40.
Movement		15/03/2021 01:			300	Vitamin B Complex Tab		252525879	15/03/2021	15/03/2021	JMS	2.000	600.
Туре		15/03/2021 01: 13/03/2021 01:	Charge		50 100	Mosquito Net Impregnate Fluconazole 100mg Tab	Surgery Drugs	135215806 139776124	15/03/2021 15/03/2021	15/03/2024 15/03/2024	Enterpi JMS	30.000 15.000	1,500 1,500
Ward													
To: 30/11/2021													
From: 23/11/2020 II To: 30/11/2021 II Lot Preparation Date II III From: III III To: III III Lot Due Date III III													
From: 23/11/2020 II To: 30/11/2021 II Lot Preparation Date From: III From: III III Lot Due Date From: III													
From: 23/11/2020 II To: 30/11/2021 II Lot Preparation Date II III From: III III Lot Due Date IIII IIII From: IIII IIII				Total Qty	: N/A						Total:	UGX	3,735



The User column can be enabled or disabled by changing the *SINGLEUSER* flag in the configuration file. Ask the Administrator to enable/disable this function or refer to the *Administrator's Guide*.

The following functions are available from the **Buttons panel** of the window **Stock Movement Browser**:

- **Charge**: record a new charge movement.
- **<u>D</u>ischarge**: record a new discharge movement.
- **Export to Excel**: export pharmaceuticals stock movements.
- **StockCard**: show the history of movement for a certain pharmaceutical (can be directly selected by the list otherwise will be requested).
- **Stock Ledger**: show the history of movement for all pharmaceuticals within a selected date range.
- <u>Close</u>: exit the *Stock Movement Browser* window.



There is no "Delete" button as movements cannot be deleted. If a mistake does occur (for example, the wrong quantity of a pharmaceutical is inserted in charge), then use a new opposite movement to correct the mistake. In this example, use a discharge movement to undo the unwanted change.

Furthermore, a search function (\underline{Filter}) is available using the **Selection panel** on the left of the window.

4.2.2.1 Search Pharmaceuticals Stock Movements (<u>F</u>ilter)

Selection Panel						
Description						
		Q				
All		-				
Туре						
All						
Move	ment —					
	Туре					
All		-				
	Ward					
All		-				
	Date					
From:	01/02/2021	15				
To:	01/04/2021	15				
Lot Pr	reparation D	ate				
From:		15				
To:		15				
Lot D	ue Date —					
From:		15				
To:		15				
<u>Filter</u> Keep						

Using the *Stock Movement Browser* search function, the information in the window can be filtered to show:

- how many boxes of pharmaceutical remain in the stock
- which movements have been made on a specific day
- in which ward a specific pharmaceutical has been discharged
- if there are any pharmaceuticals expired

Queries about movements of pharmaceuticals can be done using the search criteria available on the **Selection panel** area of the **Stock Movement Browser** window (left side of the browser). The search results are shown in the **Data table** area.

The **Selection panel** is used to select a group of movements according to specific filters. The filter is set using the tools contained in the **Selection panel**.

Filters refer to three different objects: the **Pharmaceutical**, the **Movement**, and the **Lot Preparation and Lot Due Date**.

For a **Pharmaceutical**, choose either its:

• Description, the pharmaceutical's name

• *Type*: Laboratory, Surgery, Chemical, and Drugs, etc.

To avoid conflicting filters, only one of the options is available at any one time. So, when the description combo box is active, the other one is not, and vice versa.

To quickly find a medical, simply type a keyword that is a part of the medical's name into the text field at the top of the pharmaceuticals products combo box and press the search button (\mathbb{Q}) that follows this text field.

For a **Movement**, choose either its:

- *Type*: specifies if it is a charge or a discharge type. If the discharge option is selected, then the ward combo box is enabled. The ward combo box allows finding any discharging movements that refer to a specific ward.
- *Date*: specifies the data range for the search, between the 'Date From' and 'Date To' values. The date tools consist of three blank areas, which (from left to right) refer to day, month and year. As a value is inserted into a blank area, moving to the next area is accomplished by using the "Tab" key on the keyboard. When the window is shown, the date range is set to the previous week by default.

Finally, for **Lot Preparation Date** and **Lot Due Date**, movements that refer to specific lots can be found by inserting:

- the *lot preparation date*: a valid time span (between 'Preparation Date From' and 'Preparation Date To')
- the *due date*; behaves similarly to the lot preparation tool and the movement date tool

Each filter can be combined with another, allowing for many possibilities.

After the filtering criteria are chosen, press the **<u>Filter</u>** button and the matching data is shown in the **Data table** area.

4.2.2.2 Insert Stock Charging Movement (Charge)

To insert charging movements, press **Charge** in the **Stock Movement Browser** window. The **Stock Movement** window is shown:

~		St	ock Movement					8
Date:	09/05/2022	+	Re	ference No.	:			
Charge Type:	Charge 🔻							
Supplier:	•							
Type a code or a description and press ENTER								
CODE	DESCRIPTION	QTY/PAC	QTY UNIT/P	ACK TOTAL L	OT NO.	EXPIRING	COST	TOTAL
·		<u>D</u> elete	<u>S</u> ave	<u>C</u> ancel				

It is possible to perform more than one charging movement at a time. The window is composed of two areas: a **Panel** and a **Grid**.

The **Panel** contains the following fields:

- Date: the date of the movement
- Charge Type: the charge type
- **Supplier**: the origin of the pharmaceutical
- **Reference No.**: the reference of the operation

The **Grid** is filled with the pharmaceuticals involved in the charging movement. To fill the grid, use the field above the grid to select a pharmaceutical. Enter into the field the code or the description of the pharmaceutical to move, and press **ENTER.** This will open the **Choose a Medical** window.

	Choose a Medical	8
CODE	DESCRIPTION	
A-23	Amonium Oxalate	
A-106	Amoxycillin /Clavulanate 375mg Tab	
A-226	Amoxycillin 125mg/5ml Powd. Susp 100ml	
A-105	Amoxycillin 250mg Caps	
P-180	Paracetamol 120mg/5ml 100ml	
P-179	Paracetamol 120mg/5ml Syrup	
P-415	Paracetamol 500 MG	
S-173	Salbutamol 4mg Tab	
D-204	Salbutamol Inhaler 10ml	
D-203	Salbutamol solution for inhalation 5ml	
	Yes No	

Select the desired medical and click $\underline{\mathbf{Y}}$ es. This will open a new window where the quantity of the medical is specified:



Then press **O**K. If there is an existing lot in the system, the *Existing Lot* window is shown:

~	Existing Lots							
?	Use an existi	ng lot?						
-		PREPARATIO		QUANTITY	COST			
	-41119164	01/04/2019	30/03/2025	69310				
	[Selected Lo	New	Lot				

If stock movement is related to this existing lot, select it and click **Selected Lot**. Otherwise, click **New Lot**; then the *Lot Information* window is shown with the following fields:

- Lot No.: the lot code
- Lot preparation: the lot preparation date
- Expiring: the lot expiring date

~	Lot Information							
?	Lot No.	Lot id						
_	Lot preparation	10/05/2022	15					
	Expiring	10/05/2022	15					
	OK Cancel							

Enter the appropriate values and then press the **OK** button. The *Input* window is shown, where the unit cost is specified:

~	Input	
?	Unit cost	
	1000	
	OK Cancel	

Then click **OK** to insert the medical information as a line in the grid.

Finally, click the **Save** button to save the charge movement.



The Lot definition can be set as automatic by changing the AUTOMATICLOT_IN flag in the configuration file, so every new charging movement automatically creates a new lot. Regardless of the setting, the Expiring Date must always be provided. Ask the Administrator or refer to the *Administrator's Guide*.



In order to avoid managing the cost of medicals, set the LOTWITHCOST flag to *no* in the configuration file. Ask the Administrator or refer to the *Administrator's Guide*.

4.2.2.3 Insert Stock Discharging Movement (Discharge)

To insert discharging movements, press the **<u>D</u>ischarge** button in the **Stock Movement Browser** window. The **Stock Movement** window is shown:

~		Stock Movement	8
Date	09/05/2022	Reference No.	
Discharge Type	Discharge 👻		
Destination	•		
	Type a code or	a description and press ENTER	
CODE	DESCRIPTION	UNIT/PACK QTY UNIT/PACK TOTAL LOT NO.	EXPIRING
	<u>D</u> elet	e <u>S</u> ave <u>C</u> ancel	

It is possible to perform more than one discharging movement at a time. The window is composed of two areas: a **Panel** and a **Grid**.

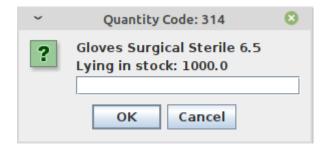
The **Panel** contains the following fields:

- Date: the date of the movement
- Discharge Type: the discharge type
- **Destination**: the ward where the discharged medical will be affected
- **Reference No.**: the reference number of the operation

The **Grid** is filled in with pharmaceuticals involved in the discharging movement. To fill the grid, enter into the field above the grid the description of the pharmaceutical to discharge, and press **ENTER.** This opens the **Choose a Medical** window.

	Choose a Medical	8
CODE	DESCRIPTION	
A-23	Amonium Oxalate	
A-106	Amoxycillin /Clavulanate 375mg Tab	
A-226	Amoxycillin 125mg/5ml Powd. Susp 100ml	
A-105	Amoxycillin 250mg Caps	
P-180	Paracetamol 120mg/5ml 100ml	
P-179	Paracetamol 120mg/5ml Syrup	
P-415	Paracetamol 500 MG	
S-173	Salbutamol 4mg Tab	
D-204	Salbutamol Inhaler 10ml	
D-203	Salbutamol solution for inhalation 5ml	

Select the desired medical and click $\underline{\mathbf{Y}}$ es. This opens the *Quantity* window, showing the existing stock for the medical. In the input field, enter the quantity of the medical to discharge.



Then press **O**K. The *Lot Information* window is shown:

~		Lot Informa	ation		8
?	Select a lot				
•	LOT ID	PREPARATION D		QUANTITY	
	119075574291	15/03/2021	15/03/2021	1000	_
		ОК	ancel		

Select the existing lot and click **OK** to insert the medical discharge into the grid.

Click the **<u>Save</u>** button to save the discharge movement.



The Lot definition can be set as automatic by changing the flag AUTOMATICLOT_OUT in the configuration file, so every new discharging movement will automatically select a suitable lot for the operation according to the expiring date. If the first selected lot does not contain a high enough quantity to serve the discharging movement, several discharging movements may be generated. Ask the Administrator or check the *Administrator's Guide* for more information.

4.3 Pharmaceuticals Stock Ward (Pharmaceuticals Stock <u>W</u>ard)

4.3.1 Main Characteristics

The Pharmaceutical Stock Ward feature allows the management of the pharmacy at the ward level.

Pharmaceuticals Stock Ward functionality can be enabled or disabled by changing the *INTERNALPHARMACIES* flag in the configuration file. Ask the Administrator or refer to the *Administrator's Guide*.

4.3.2 Functions of Pharmaceuticals Stock Ward

To access the functions of Pharmaceuticals, press **Pharmaceutical Stock <u>W</u>ard** on the Pharmacy menu shown below.

~	Pharmacy	8
	<u>P</u> harmaceuticals	
	Pharmaceutical <u>S</u> tock	
Ph	armaceutical Stock <u>W</u> ar	d

The window *Ward Pharmacy*, shown below, will be opened. All functions available under Pharmaceutical Stock are accessible from the *Ward Pharmacy* window selecting one WARD on the top left of the window.

он	Ward Pharmacy	×
<select a="" ward=""> ▼ WARD</select>	Date From: 20/12/2022	20/12/2022
	<u>C</u> lose	

After the selection of the ward (FEMALE WARD in this example), the *Ward Pharmacy* window is shown, allowing for the management of the ward pharmacy of the FEMALE WARD:

он	Ward Pharmacy			×
FEMALE WARD 🔻 WARD	Date F	rom: 08/06/2021	Date To:	08/06/2022
Medical	Outcomes Incomings	Drugs		
All Types 🗸 🗸	Double click to show lot d	etails		
	MEDICAL	QUANTITY	UNITS	
	Acyclovir 200mg Tab	100.0	pieces	<u>R</u> ectify
All Medicals	Amoxycillin 250mg Caps	1000.0	pieces	<u>R</u> ectify
All Medicals	Mosquito Net Impregnated	20.0	pieces	<u>R</u> ectify
Age	X-Ray Fixer 3.3kg for 22.5 Ltr		pieces	Rectify
Age From: 0 Age To: 0	Paracetamol 500 MG	200.0	pieces	<u>R</u> ectify
Sex ● All ○ Male ○ Female				
Weight				
From 0 To 0				
<u>F</u> ilter Re <u>s</u> et				
Count: 0				
<u>N</u> ew <u>R</u> ectify	Report <u>E</u> xcel Stoo	<u>k</u> Card Stoc	k <u>L</u> edger <u>C</u> l	ose

The available functions are:

- <u>N</u>ew: create a new discharging movement for the patient.
- **<u>Rectify</u>**: rectify the quantity lying in stock (see 6.3.2.1 Rectify).
- **Report**: print the ward medical inventory report.
- **<u>Excel</u>**: export the data in a format to import into Excel.
- **StockCard**: show the history of movement for a certain pharmaceutical (can be directly selected by the list otherwise will be requested).
- **Stock Ledger**: show the history of movement for all pharmaceuticals within a selected date range.
- <u>Close</u>: exit from the *Ward Pharmacy* window.

Differently from the **Pharmaceuticals** <u>Stock</u> functionality, the **Pharmaceutical** Stock <u>W</u>ard allows only discharging movement to patients since it is an internal management of pharmaceuticals held in the ward after they have been "charged" by the main pharmacy. It is also possible that the discharging movement from ward to ward can be accomplished.

The *Ward Pharmacy* window shows a **Filter panel** on the left, a **Movements panel** in the rightcenter, and a **Button panel** at the bottom.

4.3.2.1 Rectify (<u>Rectify</u>)

It is possible to rectify the quantity held in stock in the Ward Pharmacy. This may be necessary when a drug is damaged or stolen. To do this, click the **<u>Rectify</u>** button to open the *Rectify* window.

~		8
	Rectify	
		In stock
Medical	· · · · · · · · · · · · · · · · · · ·	
Lot No.	Choose a <u>L</u> ot <u>N</u> ew Lot	
Actual Quantity		
Reason		
	<u>O</u> K <u>C</u> ancel	

- Select the medical. Once the medical has been selected, the quantity currently in stock is displayed.
- If lots exist for the drug, click **Choose a Lot**; otherwise, click on <u>New Lot</u> (new lot creation).
- Modify the Actual Quantity.
- Enter the reason for the rectification.

~		8
	Rectify	
		In stock
Medical	Acetazolamide 250mg Tab 💌	120.0
Lot No.	AUTO_I_98 Choose a Lot New Lot	In lot
Actual Quantity		120.0
Reason	Reducing quantity to 118 (scrapping 2 tablets)	
	<u>O</u> K <u>C</u> ancel	

Click $\underline{O}K$ to save the rectification or $\underline{C}ancel$ to abort the change.

4.3.2.2 Search Ward Pharmacy Movements (Filter)

Medical
All Types 🗸
All Medicals
Age
Age From: 0 Age To: 0
Sex
● All 🔾 Male 🔷 Female
Weight
From 0 To 0
<u>F</u> ilter Re <u>s</u> et
Count: 0

The **Filter panel** allows the filtering of registered movements by:

- Medical
- Age
- Sex
- Weight

The counter at the bottom automatically displays the number of movements that match the filtering criteria after clicking the **<u>Filter</u>** button.

The **Reset** button resets all the values in the **Filter panel** back to their default values as shown in the figure above.

4.3.2.3 The Movements Panel

The Movements panel is made up of three tabs:

- **Outcomes**: shows all the movements registered between the dates in the **From** and **To** fields at the top of the window. By default, **From** and **To** dates are set to the current date. Every movement is identified by the following fields:
 - **Date**: the date of the movement.
 - **Patient**: the patient the movement is related to, their age, sex, and weight (ND if the weight has not been defined at the moment of registration).
 - Medical: the drug subject of the movement.
 - **Quantity**: the quantity subject of the movement.
- **Incomings**: shows all incomings from the main pharmacy; it is to say, all discharging movements registered in the *Pharmaceutical Stock* window related to the selected ward.
- Drugs: the number of drugs remaining in the selected ward as a result of all incoming minus all

the outgoings.

4.3.2.4 Inserting a New Ward Pharmacy Movement (New)

To insert ward pharmacy movements, press the <u>N</u>ew button in the **Ward Pharmacy** window. The **New / Edit** window is shown:

OH New / Edit					×
O Patient			8 s	elect <u>P</u> atient	8
🔘 Internal use 📗	NTERNAL USE				
Another Ward	MATERNITY WARD		-		
parac	Raracetamol	500 MG		▼ <u>+ M</u> e	edical
Paracetamol 500 MC	MEDICAL		QUA 10.0	NTITY	LOT NO. AUTO
	-				
				🗰 Remove	Item
		OK Cancel		- Keniove	, item

As mentioned previously, only discharging movements are allowed in this functionality. So, the information required is the following:

- **Patient** or **Internal use** or **Another Ward**: a registered patient can be selected by clicking on the <u>**Pick Patient**</u> button so the movement is associated with his/her ID or select **Internal use** and type a description to specify that the movement is not related to a patient. Selecting **Another Ward** allows for choosing the destination ward from the list provided.
- Medical: first select the drug to give to that patient (the only ones that are in the ward as a

result of a previous discharging movement in the *Pharmaceutical Stock Browser*) from the dropdown list and then press the <u>Medical button</u>. It is possible to specify the quantity (multiple and half-piece are allowed) in the window shown:

~	Quantity:	8
?	Acyclovir 200mg Tab Lying in stock: 100.0	
	OK Cancel	

If *AUTOMATICLOTWARD_TOWARD* has been enabled, the user will be requested to select a lot (similar to Insert Stock Discharging Movement).



The lot selection can be enabled or disabled (set as automatic) by changing the flag AUTOMATICLOTWARD_TOWARD in the configuration file, so every new discharging movement will automatically select a suitable lot for the operation according to the expiring date (FEFO). If the first selected lot does not contain enough quantity to serve the discharging movement, several discharging movements may be generated if the quantity laying in other lots can satisfy the request. Ask the Administrator or check the *Administrator's Guide* for more information.

Before pressing the <u>OK</u> button, insert as many Medicals as needed; it will show a corresponding number of movements in the **Outcomes** tab of the **Movement panel** in the **Ward Pharmacy** window. These movements are also visible in the **Incomings** tab of the **Movement panel** in the **Ward Pharmacy** window of the receiving ward, in case of discharging to another ward.

5 Laboratory (Laboratory)

5.1 Main Characteristics

The Laboratory features are used to manage the laboratory exams.

Press the **Laboratory** button or "Alt + L".

он	_ ×
	User: admin
	<u>O</u> PD
	<u>P</u> harmacy
	<u>L</u> aboratory
	<u>Admission/Patient</u>
	A <u>c</u> counting
	S <u>t</u> atistics
	<u>V</u> accines
RMATICI A TITTAE	<u>W</u> orksheet
INDEL	<u>R</u> eports
TVT	<u>S</u> ettings
HOSPI	<u>H</u> elp
ō	<u>L</u> ogout

It is possible to create, modify or delete exams.

- Insert a new laboratory exam
- Delete (or edit) an existing exam
- Select some exams with the Search button (select the exam's name and the range of dates for the exam)

5.2 Functions of Laboratory

To access the Laboratory's functions, press **<u>L</u>aboratory** on the main menu of Open Hospital. The *Laboratory Browser* window is shown:

All functions available under **<u>L</u>aboratory** are accessible from the *Laboratory Browser* window, shown below. By default, the system shows all the laboratory exams record in the last week.

~	Laboratory Browser – Q								
Select an exam	DATE	PA	TIENT			EXAM	RESULT		
	15/03/2021 19:41	Jeffreys Risa			3.1 Blood Slide (N	1alaria)	NEGATIVE		
All	15/03/2021 19:41	Jeffreys Risa			3.2 Blood Slide (C	THERS, E.G. TRIUPHANOSOMIAS, MICRIFI	NEGATIVE		
	15/03/2021 14:35	Depuy Darrell			7.3.3 GOT		<= 50 (NORMAL)		
Date From: 05/09/2020	15/03/2021 14:35	Depuy Darrell			7.3.4 ALT/GPT		> 50		
	15/03/2021 14:35	Curtis Courson			8.1 OCCULT BLOO	D	NEGATIVE		
Date To: 12/09/2022	15/03/2021 14:35	Nieves Julietta			3.1 Blood Slide (N	Ialaria)	NEGATIVE		
	15/03/2021 14:35	Nieves Julietta			3.21 Trypanosom	iasis	NEGATIVE		
Search	15/03/2021 14:35	Nieves Julietta			3.6 CSF WET PREI	P	NEGATIVE		
	15/03/2021 12:32	Sara Hucklington			5.4 LEISMANIA		NEGATIVE		
	15/03/2021 12:32	Sara Hucklington			7.4.1 CREATININA		1.4 - 2.5		
	15/03/2021 12:16	Eddings Carmine			1.5 ESR		NORMAL		
	13/03/2021 22:47	Geremia Dickinson			2.1 Grouping		AB RH+		
	13/03/2021 22:47	Geremia Dickinson			7.4.1 CREATININA		< 1.4 (NORMAL)		
	13/03/2021 01:17	Kenty Willis			3.1 Blood Slide (N	Aalaria)	NEGATIVE		
	13/03/2021 01:17	Kenty Willis			4.6 OTHER C&S		NEGATIVE		
	13/03/2021 00:54	Bumpers Ferdinand			2.2 Comb's Test		NEGATIVE		
	13/03/2021 00:54	Bumpers Ferdinand			3.1 Blood Slide (M	Aalaria)	NEGATIVE		
	13/03/2021 00:50	Mary Garrington			URINALYSIS		Multiple results		
	23/11/2020 16:02	Quinlan Coors			7.1 PROTEIN		NEGATIVE		
	23/11/2020 16:02	Quinlan Coors			7.2 SUGAR		NORMAL		
	21/11/2020 22:40	Hobert Kittelson			1.4 Film Comment	t	0		
	21/11/2020 22:40	Hobert Kittelson			1.6 Sickling Test		NEGATIVE		
	21/11/2020 22:40	Hobert Kittelson			4.1 CULTURE AND	SENSITIVITY (C&S) FOR HAEMOPHILUS IN	POSITIVE		
	21/11/2020 22:40	Janusz Lavera			1.4 Film Comment	t	0		
	21/11/2020 22:08	Vincent Arata			4.6 OTHER C&S		NEGATIVE		
	21/11/2020 22:08	Vincent Arata			5.4 LEISMANIA		NEGATIVE		
	21/11/2020 22:08	Vincent Arata			6.4 HEPATITIS		NEGATIVE		
	21/11/2020 02:23	Genna Susterlind			6.4 HEPATITIS		NEGATIVE		
	21/11/2020 02:23	Genna Susterlind			6.5 OTHERS E.G E	BRUCELLA, RHEUMATOID FACTOR, WEIL FE.	NEGATIVE		
	21/11/2020 01:52	Jestine Dacruz			5.5 ZN		NEGATIVE		
	21/11/2020 01:47	Stanton Durrah			7.4.1 CREATININA	i.	< 1.4 (NORMAL)		
	21/11/2020 01:47	Stanton Durrah			7.4.2 UREA		10-55 (NORMAL)		
	21/11/2020 01:41	Shannan Matias			6.2 TPHA		POSITIVE		
	21/11/2020 01:41	Eddy Rambin			7.4.1 CREATININA		NEGATIVE		
	21/11/2020 01:41	lazmine Gwvn			3.1 Blood Slide (N	Malaria)	+++		
		<u>N</u> ew <u>E</u> dit	<u>D</u> elete	<u>P</u> rint Table	Print <u>L</u> abel	<u>C</u> lose			

Data that identify laboratory exams are the following:

- Date: indicates the date and time when the exam was entered
- Exam: the description of the exam
- Result: the result of the exam

To access the other functions of the laboratory in the **Buttons panel**, the following choices are available:

- <u>N</u>ew: enter a new laboratory exam.
- **<u>E</u>dit**: modify an existing laboratory exam.
- **<u>D</u>elete**: delete an existing laboratory exam.
- **<u>P</u>rint Table**: print the list of laboratory exams shown in the table.
- **Print** <u>L</u>**abel**: print the labels of the samples for laboratory exams.
- **<u>C</u>lose**: close the window and return to the main menu.

Furthermore, a search function (**Search)** is available using the **Selection panel** on the left of the window.

5.2.1 Search Laboratory Exams (Search)

The search function allows for selecting and showing laboratory exams on the **Data table** of the *Laboratory Browser* window.

In the example below, all types of exams executed on the date 21.11.2020 are shown in the **Data table**.

~			Laborato	ry Browser	_ (
Select an exam DATE		ct an exam DATE PATIENT EXAM			
		21/11/2020 22:40	Hobert Kittelson	1.4 Film Comment	0
	-	21/11/2020 22:40	Hobert Kittelson	1.6 Sickling Test	NEGATIVE
		21/11/2020 22:40	Hobert Kittelson	4.1 CULTURE AND SENSITIVITY (C&S) FOR HAEMOPHILUS IN	IF POSITIVE
Date From:	: 21/11/2020 📅	21/11/2020 22:40	Janusz Lavera	1.4 Film Comment	0
		21/11/2020 22:08	Vincent Arata	4.6 OTHER C&S	NEGATIVE
Date To:	21/11/2020	21/11/2020 22:08	Vincent Arata	5.4 LEISMANIA	NEGATIVE
_		21/11/2020 22:08	Vincent Arata	6.4 HEPATITIS	NEGATIVE
	Search	21/11/2020 02:23	Genna Susterlind	6.4 HEPATITIS	NEGATIVE
		21/11/2020 02:23	Genna Susterlind	6.5 OTHERS E.G BRUCELLA, RHEUMATOID FACTOR, WEIL FE	
		21/11/2020 01:52	Jestine Dacruz	5.5 ZN	NEGATIVE
		21/11/2020 01:47	Stanton Durrah	7.4.1 CREATININA	< 1.4 (NORMAL)
		21/11/2020 01:47	Stanton Durrah	7.4.2 UREA	10-55 (NORMAL)

Data about exams can be selected by choosing specific fields among the following:

- Select an exam: Valid values are:
 - All: exams of all types are shown
 - $\circ~$ Pick a single exam from the list; only exams of the selected type are shown
- **Date**: "Date From" and "Date To" only shows the exams executed within the requested time period

After the selection press, the **Search** button; the system shows in the table results of the search applying the criteria requested.

5.2.2 Create a New Laboratory Exam (New)

Press the <u>New</u> button in the *Laboratory Browser* window. The *New Laboratory Exam* window is shown:

~	New Laboratory Exam – 😣
Date	20/06/2022 5 6:40 + Material <
Exam	Select an exam 💌
Patient	In Select a patient
Name	Age Sex (M/F)
Note	
Result –	
	<u>O</u> K <u>P</u> rint <u>C</u> ancel

To record the visit, enter the following fields:

- **Date**: the date of the exam; the application defaults to the current date.
- Material: choose from the available values the material used in the exam.
- **Exam**: choose the exam.
- **Patient In**: it activates itself if the selected patient is currently admitted; it is possible to change it if needed.
- **Select a patient**: select the patient that is examined. The field is not mandatory as the patient's data be input into the following fields.
- Name: the first and last name of the patient (automatically filled if a patient is selected).
- Age: the age of the patient (range 0-120) (automatically filled if a patient is selected).
- Sex: the value *M* for male or the value *F* for female (automatically filled if a patient is selected).
- Note: a free-form area for notes and/or description.
- **Result**: based on the exam chosen the panel is populated with all available results for selection.

5.2.2.1 Results

In Open Hospital, there are two kinds of possible results for each exam:

- **Single Result**: selection of a single result from a list (Procedure 1)
- Multiple Results: selection of many results from a list of positive/negative values (Procedure 2)
- Or manually inputting the precise result (Procedure 3)

			он	Edit L	aboratory Exam	_ ×
~	New Laboratory Exam	- 😣	Date	26/10/2022	+ Material Undefi	ned 💌
Date	30/06/2022 15 16:48 + Material	-	Exam	URINALYSIS		
Exam	1.1 HB	-	🔲 In	P. Code 525	Mary Garrington	-
Patient	In Select a patient	-	Patient'			
Name	Age Sex (M/F)		Name	Mary Garrington	Age 0	Sex (M/F) F
Note			Note			•
		* *]		
Result -			Result			
	>=12 (NORMAL)			BILIRUBIN	● P ○ N	
	>=12 (NORMAL)			HCG	○ P ● N	
	6 - 12 < 6			PROTEIN	○ P ● N	
				SEDIMENTS	○ P ● N	
				SUGAR	● P ○ N	
				UROBILINOGEN	○ P ⑧ N	
				<u>0</u> K	Print Cancel	
	<u>QK</u> <u>Print</u> <u>C</u> ancel					
~	New Laboratory Exam	- 😣				
Date	29/06/2022 1 16:53 + Material	-				
Exam	1.1 HB (Procedure 3)	-				
Patient	In Select a patient	-				
Name	Age Sex (M/F)					
Note						
		* *				
Result						
	11.2 gal					
L						
	OK Print Cancel					



Exams, Exam Type, and Results can be defined by the Administrator. Ask the Administrator or check the Settings chapter.

When the data is specified, the **Buttons panel** provides the following choices:

- **<u>O</u>K**: confirm and record the data.
- **Print**: print the result.

• **<u>C</u>ancel**: close the window and return to the *Laboratory Browser* window.

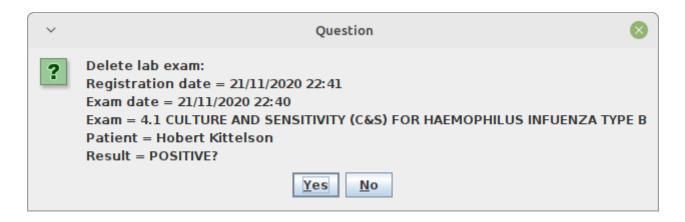
5.2.3 Modify a Laboratory Exam (Edit)

To modify an exam, highlight the exam in the *Laboratory Browser* window. Once the exam has been highlighted, press the <u>Edit</u> button to enter the *Edit Laboratory Exam* window, shown below. Now the record is available for changes. This function allows for editing all the data for the exam including setting the result of the exam.

~	Edit Laboratory Exam – 😣
Date	21/11/2020 1:40 + Material Undefined -
Exam	1.1 HB
Patient	🖌 In Hutcheson Jere 🔍
Name	Jere Hutcheson Age 40 Sex (M/F) F
Note	
Result –	
	6 - 12 < 6 >=12 (NORMAL)
	OK Print Cancel

5.2.4 Delete Laboratory Exam (Delete)

To delete an exam, highlight the exam in the *Laboratory Browser* window. Once the exam has been highlighted, press the **Delete** button, and a confirmation window is shown:



5.3 Laboratory Extended

The Laboratory functionality can be extended by changing the *LABEXTENDED* flag in the configuration file. Ask the Administrator or refer to the *Administrator's Guide*.

5.3.1 Extended Laboratory Browsing

If the extended Laboratory functionality is enabled, the Laboratory Browser window shows a new column containing the name of the patient.

~				Laboratory	Browser			- (
Select an exam DATE PATIENT EXAM				EXAM	RESULT			
			15/03/2021 19:41:32	Jeffreys Risa		3.1 Blood Slide (Malaria)	NEGATIVE	
1		-	15/03/2021 19:41:32	Jeffreys Risa		3.2 Blood Slide (OTHERS, E.G. TRIUPHANOSOMIAS, MICRIFI	NEGATIVE	
			15/03/2021 14:35:46	Depuy Darrell		7.3.3 GOT	<= 50 (NORMAL)	
Date From:	20/04/2000	15	15/03/2021 14:35:46	Depuy Darrell		7.3.4 ALT/GPT	> 50	
			15/03/2021 14:35:26	Curtis Courson		8.1 OCCULT BLOOD	NEGATIVE	
Date To:	27/04/2022	15	15/03/2021 14:35:09	Nieves Julietta		3.1 Blood Slide (Malaria)	NEGATIVE	
			15/03/2021 14:35:09	Nieves Julietta		3.21 Trypanosomiasis	NEGATIVE	
	Search		15/03/2021 14:35:09	Nieves Julietta		3.6 CSF WET PREP	NEGATIVE	
			15/03/2021 12:32:17	Sara Hucklington		5.4 LEISMANIA	NEGATIVE	
			15/03/2021 12:32:17	Sara Hucklington		7.4.1 CREATININA	1.4 - 2.5	
			15/03/2021 12:16:50	Eddings Carmine		1.5 ESR	NORMAL	
			13/03/2021 22:47:53	Geremia Dickinson		2.1 Grouping	AB RH+	
			13/03/2021 22:47:53	Geremia Dickinson		7.4.1 CREATININA	< 1.4 (NORMAL)	
			13/03/2021 01:17:47	Kenty Willis		3.1 Blood Slide (Malaria)	NEGATIVE	
			13/03/2021 01:17:47	Kenty Willis		4.6 OTHER C&S	NEGATIVE	
			13/03/2021 00:54:26	Bumpers Ferdinand		2.2 Comb's Test	NEGATIVE	
			13/03/2021 00:54:26	Bumpers Ferdinand		3.1 Blood Slide (Malaria)	NEGATIVE	
			13/03/2021 00:50:42	Mary Garrington		URINALYSIS	Multiple results	
			23/11/2020 16:02:33	Ouinlan Coors		7.1 PROTEIN	NEGATIVE	
			23/11/2020 16:02:33	Quinlan Coors		7.2 SUGAR	NORMAL	
			21/11/2020 22:40:40	Hobert Kittelson		1.4 Film Comment	0	
			21/11/2020 22:40:40	Hobert Kittelson		1.6 Sickling Test	NEGATIVE	
			21/11/2020 22:40:40	Hobert Kittelson		4.1 CULTURE AND SENSITIVITY (C&S) FOR HAEMOPHILUS I	POSITIVE	
			21/11/2020 22:40:18	Janusz Lavera		1.4 Film Comment	0	
			21/11/2020 22:08:31	Vincent Arata		4.6 OTHER C&S	NEGATIVE	
			21/11/2020 22:08:31	Vincent Arata		5.4 LEISMANIA	NEGATIVE	
			21/11/2020 22:08:31	Vincent Arata		6.4 HEPATITIS	NEGATIVE	
			21/11/2020 02:23:20	Genna Susterlind		6.4 HEPATITIS	NEGATIVE	
			21/11/2020 02:23:20	Genna Susterlind		6.5 OTHERS E.G BRUCELLA, RHEUMATOID FACTOR, WEIL FE	NEGATIVE	
			21/11/2020 01:52:02	lestine Dacruz		5.5 ZN	NEGATIVE	
			21/11/2020 01:47:45	Stanton Durrah		7.4.1 CREATININA	< 1.4 (NORMAL)	
			21/11/2020 01:47:45	Stanton Durrah		7.4.2 UREA	10-55 (NORMAL)	
			21/11/2020 01:41:32	Shannan Matias		6.2 TPHA	POSITIVE	
			21/11/2020 01:41:18	Eddy Rambin		7.4.1 CREATININA	NEGATIVE	
			21/11/2020 01-/11-08			3.1. Blood Slide (Malaria)		
				New Edit Delete Pri	nt Table	Print Label Close		
				Mew East Delete Pri	incrable			

The presence of the patient name column is required by this mode.

5.3.2 New Laboratory Exam (New)

The *New Laboratory Exam* window is now strictly related to the patient, that is to say, that the exam must be assigned to a patient previously registered in the system.

Before one closes the window with the exam result, a patient must be selected from the list; the fields in the **Patient's Data** panel provide some simple patient details.

A search field can be used to find a patient by typing part of his/her name or his/her Open Hospital code (which is specified in the Patient window, see *Patient Extended*).

The *New Laboratory Exam* window is shown:

~	New Laboratory Exam – 😣
Date	20/06/2022 5:52 + Material -
Exam	Select an exam 🗸
🗌 In	P. Code Select a patient 💌
Patient's	s Data
Name	Age Sex (M/F)
Note	
Result —	
	<u>O</u> K <u>P</u> rint <u>C</u> ancel

The **Patient's Data** panel cannot be modified except for the **Note** field and only shows the information related to the selected patient.

5.3.3 Laboratory Multiple Insert

The *New Laboratory* functionality can be extended by changing the *LABMULTIPLEINSERT* flag in the configuration file. The flag *LABEXTENDED* has to be enabled too. Refer to the *Administration's Guide*.

The New Laboratory Multiple allows multiple exam insertion for each patient, avoiding repeating the new laboratory exam procedure (**New**) for every exam for the same patient.

5.3.3.1 New Patient Exams (<u>N</u>ew)

Press the <u>New</u> button in the *Laboratory Browser* window: The *New Patient Exams* window is shown (including sample exam data):

~	New Pat	ient Exams	8
Date	23/07/2021 🛅 16:11 🕂		
Patient		💩 <u>F</u> ind Patient 🛛 🕷	🖲 OPD 🔾 IP
	EXAM	RESULT	🕂 <u>E</u> xam 🗱 <u>R</u> emove
1.1 HB		>=12 (NORMAL)	Material
1.2 WBC Cou	nt	4000 - 7000 (NORMAL)	
URINALYSIS		Multiple results	
			Result
			🗌 HCG
			PROTEIN
			SEDIMENTS
Note			
I			
	<u>0</u>	K <u>C</u> ancel	

To record the visit, enter the following fields:

- Date: the date of the exam, the application defaults to the current date.
- Patient: select a patient by pressing the Find Patient button.
- **OPD/IPD**: the window automatically checks if the patient is admitted or not in the hospital; the value can be changed if needed.
- **Exam**: choose the exam. A first window asks for the material. Then a second window asks for the exam. Finally, a third window asks for the result if the exam allows only a single result; otherwise the list of multiple results are shown in the right panel, together with the chosen material.
- **<u>Remove</u>**: remove a selected exam.
- Note: additional exam reporting (different for each exam).



At any time, before pressing OK, modifications can be made to every exam by clicking on it in the list and changing material, results, or notes in the related

panels.

6 Accounting (Accounting)

6.1 Main Characteristics

Accounting is the function that is used to manage the billing process where bills for pharmaceuticals, operations, exams, and other costs of a patient are created and managed. Currently, the billing process is not linked with other functions of **Open Hospital** and therefore the application does not generate the accompanying billing information based on the therapy followed by the patient: <u>the billing information must be input for all items manually.</u>

In addition, the accounting function supports the management of bill payments (total or partial) and the generation of reports.

Submenu: Press the Accounting button or "Alt + C" to open the Accounting submenu



6.2 Functions of Accounting

All functions available under A<u>c</u>counting are accessible from the *Patients Bills Management* window, shown below. To access the *Patient Bills Management* window, press **Bill <u>M</u>anager** on the *Accounting* menu.

By default, the window shows in the **Data table** all the bills for today (current day).

				Patier	nt Bills Management				-	. o x
	admin 🔻	Today Date Fro	m: 09/11/2	2021 🛅 Date To: 09	9/11/2021 🛅 De	cember 🔻 🗧 2022	*		8	
Bills	Pending	Closed								
USER	ID	DATE	PAT. ID	P	ATIENT	AMOUNT	LAST PAYMENT	STATUS	BALANCE	IN/OU
admin	47	09/11/2021 18:29	540	Redy Villen		80.0	09/11/2021 18:30	С	0.0	
admin	46	09/11/2021 17:44	539	Philomena Redondo		102.0	09/11/2021 17:44	0	72.0	
dmin	45	09/11/2021 17:22	537	Wally Simpsons		60.0	09/11/2021 17:22	С	0.0	
admin	44	09/11/2021 15:40	535	Kenny Flanagan		151.0	09/11/2021 15:41	С	0.0	
admin	43	09/11/2021 15:39	534	Mirta Veluma		80.0	09/11/2021 15:39	0	30.0	

For each bill, the following <u>data</u> are shown in the **Data table**:

- USER: the user who initially created or later updated the bill
- ID: the number of the bill (created automatically by the application).
- DATE: the date and time of the bill creation.
- PAT ID: the patient's ID (created automatically by the application at the registration time).
- **PATIENT**: the patient's name.
- AMOUNT: the total amount of the bill.
- LAST PAYMENT: the date and time of the last payment.
- **STATUS**: the status of the bill; values are: "O" (open) if not fully paid; "C" (closed) if fully paid.
- BALANCE: the bill amount which has not yet been paid.
- IN/OUT: the bill refers to an admission or OPD

The following <u>filter options</u> are available at the **Upper panel** of the **Patient Bills Management** window:

- [user] selector (e.g. 'admin'): users (cashiers) filter
- **<u>T</u>oday**: shows in the **Data table** only the bills for the current day.
- Date From and Date To: dates selectors used to select a period
- [Month] selector (e.g. 'December'): to quickly select one month in Date From and Date To field
- [year] selector (e.g. '2022'): to quickly select a year in Date From and Date To field
- [Patient] selector: to filter bills for a patient within the specified Date From and Date To period

The following <u>functions</u> are accessible from the **Buttons panel** of the **Patient Bills Management** window:

- <u>N</u>ew Bill: insert a new bill.
- Edit Bill: modify a stored bill if its status is "O" (Open).
- **Delete Bill**: delete a stored bill (does not remove the bill but changes the status to "D").
- **Receipt**: print a bill receipt.
- **<u>Report</u>**: print a variety of reports.
- **<u>C</u>lose**: exit from **Patients Bills Management** and return to the main menu

Furthermore, the *Patient Bills Management* window shows an **Incomes Table** with the following information:

- First Row: the PAID and UNPAID amounts (in the specified currency) for Today
- Second Row: the PAID and UNPAID amounts (in the specified currency) for the visualized Period
- Third Row: the amount PAID for Today and within the selected Period for the selected User



The USER column, The [User] selector and the **Third Row** are shown only in multiuser mode (see [function-accounting])

6.2.1 Insert a New Bill (New Bill)

The **New Bill** function is used to generate a new bill for a patient. Press the <u>New Bill</u> button in the *Patients Bills Management* window to access the *New Patient Bill* window, shown below.

To record a new bill, it must be saved with the **<u>Save</u>** function (see description below).

Before describing the function of the *New Patient Bill* window, the components of the window are described.

The *New Patient Bill* window is composed of four areas: the **Bill panel** at the top, the **Item panel** in the center, the **Payments panel** at the bottom, and the **Buttons panel** on the right.

Bills are composed of items. A billing item is a cost related to either a pharmaceutical, an operation, an exam, or other/custom costs.

Data shown in the **Bill panel** area are:

- Date: the date and time of the bill.
- **Patient**: the patient associated with the bill.
- List: the Price List that will be used for this bill

NOTE: Price Lists can be defined by the Administrator. Ask the Administrator or check the Settings chapter.

Data shown in the Item Panel area are:

• ITEM, QTY, AMOUNT: the descriptions of the bill entry, the selected quantity, and the amount;

the amount is calculated as the unit cost of the item multiplied by the quantity;

• TOTAL: the total amount of the bill

NOTE: Prices, or unit costs, can be defined by the Administrator. Ask the Administrator or check the Settings chapter.

Data shown in the **Payments panel** area are:

- Date: the date and time of the payment.
- Amount: the amount of the payment.
- **BALANCE**: the remaining amount to be paid (the difference between the Total (*) and the sum of the payments).

N	New Patient Bill ×								
Da	ate	10/10/2022	15	18:18	•		💐 Find <u>P</u> atient	8	admin
Pa	atient						List	Basic 💌	OPD
	TOTAL				UGX	_		0	🐈 <u>M</u> edical
		ITEM			QT	Y	AMOUNT		Peration
									🐈 <u>E</u> xam
									🐈 O <u>t</u> her
									🐈 C <u>u</u> stom
									😫 Remove <u>I</u> tem
	TO PAY				UGX			0	🐈 Payment
									🐈 <u>R</u> efund
									🔛 Payme <u>n</u> t Receipt
									🗱 Remo <u>v</u> e Payment
									🚽 <u>G</u> ive Change
									💾 <u>S</u> ave
								-	√ P <u>a</u> id
	BALANCE				UGX			0	🖉 <u>C</u> lose

To insert a new bill, **Date field** value is required. The application defaults to the current date and time, but the values can be modified.

In addition, a patient must be selected. To do that, press the **Find <u>P</u>atient** button on top of the screen. The **Patient Selection** window is shown:

~	Patie	nt S	election			8
Search Patie	nt New Patien	t				
		_]			
CODE 519	NAME leanna Rickember	4				
519	2	- ^		Name:		
518	Jeremy Lindon	-11		Age:		
517	Maria Njoko Genna Susterlind	-11		Sex:		
515	Alvaro Robertson	-				
515	Mario Rossi	-11		тов:		
514	Makenzie Everton	-11		TOB.		
512	Millman Enriquetta	-11	Tax Number ID			
512	Henderson Alba	-11	Tax Number ID			
510	Racuba Scottie	-11				
509	Ventier Asia	-11	Address		City	
508	De Koenig Melissa	-11	Address		City	
507	Westermann Fred	-11				
506	Zabel John	-11	Parents			
505	Curtney Gina		- di citto			
504	Froue Jane					
503	Sturgeon Charlie					
502	Furlong Merryman					
500	Matthews Ruth		Next of Kin		Telephone	
499	Vessin Jordan					
498	Falky Mady					
497	Vernon Reklin		Blood Type		Insurance	
496	Angelo Jaime					
495	Rodriguez Oscar					
494	James Veronica		Marital Status		Profession	
493	Musso Kina					
492	Ballantine Lashawna					
491	Holter Josette		Patient Notes			
490	Cairo Tawnya					
489	Morning Mellisa					
488	Glennis Isabelle		-			
107	Johanson Tamia	_				
	<u>S</u> elect		<u>C</u> ancel			

Once the patient is selected, start entering the data related to the bill.



A patient can have several pending bills only if the parameter ALLOWMULTIPLEOPENEDBILL is enabled (see the Administrator Manual). Otherwise, if the patient has a pending bill, the bill will be recalled to edit it. A new bill cannot be started for a patient before closing the previous bill.

There are several types of bill categories (or types) identified by the buttons in the **Buttons panel** on the right of the window:

- **Medical**: enter bill entries for pharmaceuticals.
- **Operation**: enter bill entries for operations.
- **<u>E</u>xam**: enter bill entries for exams.
- **Other**: enter other prices defined in the Price List.
- Custom: enter custom items defined on the fly.



Types can be defined by the Administrator. Ask the Administrator or check the Settings chapter.

6.2.1.1 Insert a Bill Entry Related to Medicals, Operations or Exams (<u>M</u>edical, <u>O</u>peration, <u>E</u>xam)

We show here how to insert a bill entry for pharmaceutical (**Medical**); the function to insert a bill entry for operation (**Operation**) and exam (**Exam**) is the same with the only difference that for the

Ν	New Patient	t Bill			×
D	Date 10/10/2022 15 18:18		▼ Schange <u>P</u> atient		admin
P	atient	Sara Hucklington		List Basic 💌	OPD
	TOTAL		UGX	10	🕂 Medical
		ITEM	QTY	AMOUNT	Operation
		sphamide 500mg Vial	1	0.0	
	5 days of	hospitalization	1	10.0	<u> </u>
					🐈 O <u>t</u> her
					🕂 C <u>u</u> stom
					Remove <u>I</u> tem
	TO PAY		UGX	10	🕂 Pa <u>v</u> ment
	10/10/202	2 18:20		7.0	🐈 <u>R</u> efund
					🔛 Payme <u>n</u> t Receipt
					🗱 Remo <u>v</u> e Payment
					付 <u>G</u> ive Change
					💾 <u>S</u> ave
					✓ P <u>a</u> id
	BALANCE		UGX	3	Ose Close

last two is not required the quantity (the quantity is always 1).

To insert a bill entry, press the **<u>M</u>edical** button. The *Medical* window is shown:

~	Medical	8
	Select a medical:	
•	4 Dimethyl Aminobenzaldelyde	-
	Acetazolamide 250mg Tab	
	Acetic Acid Glacial 1 ltr	
	Aceton 99% 1ltr	
	Aciclovir cream	
	Acyclovir 200mg Tab	
	Adhesive Tape 2.5cm x 5m	
	Adhesive Tape 7.5cm x 5m	
	Adrenaline 1mg/ml 1ml Amp	
	Air ring set 43x15cm, rubber with pump	-
	OK Cancel	

Using the mouse, highlight the required pharmaceutical (medical).

The **Buttons panel** of the *Medical* window has the following choices:

• **OK**: select the highlighted pharmaceutical

• **<u>Cancel</u>**: return to the *New Patient Bill* window without selecting any pharmaceutical

If **OK** is selected, the *Quantity* window is shown, where the quantity of the pharmaceutical used by the patient can be entered:

~	Quantity	8
0	Insert quantity:	
	OK Cancel	

The **Buttons panel** of the *Quantity* window has the following choices:

- **OK**: select the highlighted pharmaceutical and return to the *New Patient Bill* window.
- **Cancel**: return to the *New Patient Bill* window without selecting any pharmaceutical.

6.2.1.2 Insert a Bill Entry Related to Various Custom Reasons (Custom)

To insert a custom bill entry, press the **Custom** button. The application will show the **Custom Item** window, shown below.

~	Custom Item 🛛 🕓	
	Choose a description:	
	Number of days of hospitalization	j
	OK Cancel	

In this window, enter a description for the custom item (in the example above, it is "Number of days of hospitalization").

The Buttons panel of the Custom Item window has the following choices:

- OK: go to another *Custom Item* window (to enter the quantity, see below).
- Cancel: return to the New Patient Bill window without inserting any custom bill entry.

~	Custom Item	8
	How much is it?	
	OK Cancel	

In the *Custom Item* window, enter the amount related to the bill entry (in the example above, the "20" is in the local currency, i.e., it is in US dollars if the country is the USA).

The **Buttons panel** of the *Custom Item* window has the following choices:

• OK: confirm the bill entry and return to the *New Patient Bill* window.

• **<u>C</u>ancel**: return to the *New Patient Bill* window without inserting any bill entry.

6.2.1.3 Remove a Bill Entry of a Bill (Remove Item)

To remove a bill entry, select the bill in the *New Patient Bill* window and then press the **Remove Item** button. The selected bill entry is removed. Bill entries can be removed before or after the final saving (see Save function described below).

6.2.1.4 Insert a Payment (Payment)

To insert a payment, press the **Payment** button. The application shows the **Quantity** window, shown below.

~	Quantity	8
	Insert quantity:	
	OK Cancel	

Provide the amount of the payment (in the example above, the "12" is in the local currency, i.e. it is US dollars if the country is the USA) in the text field.

The **Buttons panel** of the *Quantity* window has the following choices:

- OK: confirm the payment and return to the *New Patient Bill* window.
- **<u>C</u>ancel**: return to the *New Patient Bill* window without inserting any payment.

6.2.1.5 Insert a Refund (<u>R</u>efund)

Sometimes the cashier has to process a refund for the patient; in this case, press the **<u>Refund</u>** button and insert the amount of the refund. The amount is converted to a negative value and added to the payments list.

6.2.1.6 Payment Receipt (Payment Receipt)

A Payment receipt can be printed at any time given that at least one payment is made. Click the **Payment Receipt** button.

6.2.1.7 Remove a Payment (Remove Payment)

A payment can be removed by selected the payment in the *New Patient Bill* window and then pressing the **Remove Payment** button.

6.2.1.8 Give Change (Give Change)

Sometimes it could be useful to calculate the difference between the bill balance and the payment amount the patient is making when paying their bill. By pressing the **<u>G</u>ive Change** button, the amount the patient is paying must be specified and the program calculates the difference between the payment and the current bill balance. If the amount being paid is greater than the bill balance (i.e., they are overpaying), the amount of change to give to the patient is displayed.

6.2.1.9 Save Function (Save)

When all the data input for a bill is completed (bill or payments), press the <u>Save</u> button in the **Buttons panel** of the *New Patient Bill* window.

The application saves the bill and returns to the *Patient Bills Management* window; the status of the bill is "O" (Open) until it is PAID (**Paid**).

6.2.1.10 Paid Function (Paid)

If the patient is going to pay the complete amount of the bill, press the **Paid** button. If the balance is not equal to zero, the system automatically adds a payment in the payments list equal to the balance and sets the bill as "C" (Closed).

6.2.1.11 Print Receipt Function

A receipt can be printed at any time by pressing the **Paid** button. *To enable this feature, the RECEIPTPRINTER* flag in the configuration file must be set and a proper printer device must be connected to the system. Ask the Administrator or refer to the *Administrator's Guide*.

6.2.1.12 Close Function (<u>C</u>lose)

The close function allows for optionally exiting from the *New Patient Bill* window without saving changes. Press the <u>Close</u> button to access the close function. The confirmation window is shown:

~	Question	8
?	Bill has been changed. Would you like to save the change	s?
	Yes No Cancel	

6.2.2 Edit an Existing Bill (Edit Bill)

To modify an existing bill, select the bill in the *Patient Bills Management* window and then press the <u>Edit Bill</u> button. The *Edit Patient Bill* window is shown:

Edit Patient	t Bill: 46			×
Date	09/11/2021 🛅 17:44	•	💐 C <u>h</u> ange Patient 🔹	admin
Patient	Philomena Redondo		List Basic v	FEMALE WARD
TOTAL		UGX	102	🕂 Medical
	ITEM	QTY	AMOUNT	+ Operation
	in section	1	80.0	+ <u>E</u> xam
	amide 250mg Tab Ik (1) S595	2	0.0 12.0	
2.1 Group		1	10.0	+ Other
				Remove <u>I</u> tem
TO PAY		UGX	102	Payment
09/11/20			110.0	🕂 Refund
09/11/20	21 17:44		-80.0	Payme <u>n</u> t Receipt
				# Remo <u>v</u> e Payment
				Give Change
				💾 <u>S</u> ave
			1	✓ P <u>a</u> id
BALANCE	Ε	UGX	72	O Close



Only bills with a status of "O" (Open) can be modified by enabled users (See User & Groups); otherwise, an A4 report is shown.

If the bill, at the time of creation, was related to an admitted patient, the related ward is shown in the upper right.

If the patient's status has changed, the application prompts for the next action:

Case 1)



If the answer selected is "Yes", the bill is updated and belongs to the "OPD" category (no admission).

Edit Patient	t Bill: 46				×
Date	09/11/2021 🛅 17:44	•	Schange Patient	8	admin
Patient	Philomena Redondo		List Ba	sic 💌	OPD
TOTAL		UGX		102	🕂 Medical
	ITEM	QTY	AMOUNT		+ operation
Caesaria	in section	1	80.0		
	amide 250mg Tab	2	0.0		🛉 Exam
	lk (1) S595	2	12.0		🕂 Other
2.1 Group	oing	1	10.0		+ Custom
					Remove <u>I</u> tem
TO PAY		UGX		102	🛉 Payment
09/11/202			110.0		+ Refund
09/11/20	21 17:44		-80.0		
					Payment Receipt
					🗱 Remo <u>v</u> e Payment
					🚽 Give Change
					💾 <u>S</u> ave
					√ P <u>a</u> id
BALANCE	Ε	UGX		72	Oclose

If the answer selected is "No", the bill remains unchanged and continues to belong to the original admission.

Edit Patient	: Bill: 46			×
Date	09/11/2021 🛅 17:44	•	🕹 C <u>h</u> ange Patient 🔹	admin
Patient	Philomena Redondo		List Basic v	FEMALE WARD
TOTAL		UGX	102	🕂 Medical
	ITEM	QTY	AMOUNT	+ Operation
Caesaria		1	80.0	
	mide 250mg Tab lk (1) S595	2	0.0	+ Exam
2.1 Group		1	10.0	+ Other
		-		+ C <u>u</u> stom
				Remove Item
TO PAY		UGX	102	🕂 Payment
09/11/202			110.0	Prefund
09/11/202	21 17:44		-80.0	Payment Receipt
				Remo <u>v</u> e Payment
				🚽 <u>G</u> ive Change
				E Save
			1	✓ P <u>a</u> id
BALANCE	<u> </u>	UGX	72	Olose

Case 2)

Questic	on X
\wedge	This patient is admitted now. Do you want to link this bill to the current admission?
	Yes No

If the answer selected is "Yes", the bill is updated and belongs to the current admission.

Edit Patient	: Bill: 46			×
Date	09/11/2021 15 17:44	•	💐 C <u>h</u> ange Patient 🔹	admin
Patient	Philomena Redondo		List Basic V	MATERNITY WARD
TOTAL		UGX	102	🕂 Medical
	ITEM	QTY	AMOUNT	+ Operation
Caesaria		1	80.0	
	mide 250mg Tab	2	0.0	🛉 <u>E</u> xam
2.1 Group	lk (1) S595	2 1	12.0	🕂 O <u>t</u> her
2.1 0100	, ing		10.0	🕂 C <u>u</u> stom
				Remove <u>I</u> tem
TO PAY		UGX	102	Payment
09/11/202			110.0	+ Refund
09/11/202	21 17:44		-80.0	
				Payme <u>n</u> t Receipt
				Remo <u>v</u> e Payment
				🚽 Give Change
				💾 <u>S</u> ave
			1	✓ P <u>a</u> id
BALANCE		UGX	72	Ø <u>C</u> lose

If the answer selected is "No", the bill is unchanged and is associated with the "OPD" category (no admission)

Edit Patient	t Bill: 46			×
Date	09/11/2021 🛅 17:44	•	💩 C <u>h</u> ange Patient 🔹	admin
Patient	Philomena Redondo		List Basic 💌	OPD
TOTAL		UGX	102	edical
	ITEM	QTY	AMOUNT	
	n section	1	80.0	
	mide 250mg Tab	2	0.0	+ Exam
2.1 Group	lk (1) S595	2	12.0	🛉 🕂 Other
2.1 0100	Jing		10.0	+ Custom
				Remove Item
TO PAY		UGX	102	Payment
09/11/202			110.0	+ Refund
09/11/202	21 17:44		-80.0	Payment Receipt
				Remove Payment
				🚽 <u>G</u> ive Change
				Save
			1	✓ P <u>a</u> id
BALANCE	<u> </u>	UGX	72	Oclose

Case 3)

Questic	on X
Λ	This bill was linked to a previous admission. Do you want to link it to the current admission instead?
	<u>Y</u> es <u>N</u> o

If the answer selected is "Yes", the bill is updated and belongs to the current admission.

Edit Patien	t Bill: 46			×
Date	09/11/2021 15 17:44	•	💐 C <u>h</u> ange Patient 🛛 💰	admin
Patient	Philomena Redondo		List Basic 💌	MATERNITY WARD
TOTAL		UGX	102	Hedical
	ITEM	QTY	AMOUNT	+ Operation
	an section	1	80.0	
	amide 250mg Tab	2	0.0	+ Exam
2.1 Grou	ilk (1) S595	2	12.0	🕂 Other
2.1 0100	ping		10.0	🕂 C <u>u</u> stom
				Remove Item
TO PAY		UGX	102	Payment
09/11/20			110.0	Refund
09/11/20	21 17:44		-80.0	Payment Receipt
				Remo <u>v</u> e Payment
				🚽 <u>G</u> ive Change
				E save
				√ P <u>a</u> id
BALANC	E	UGX	72	🖉 <u>C</u> lose

If the answer selected is "No", the bill is unchanged and belongs to the original admission.

Edit Patien	t Bill: 46				×
Date	09/11/2021 15 17:44	•	🕹 C <u>h</u> ange Patient 🔹		admin
Patient	Philomena Redondo		List Basic	-	FEMALE WARD
TOTAL		UGX	10	2	🕂 Medical
	ITEM	QTY	AMOUNT		Operation
	an section	1	80.0		
	amide 250mg Tab	2	0.0		<u> </u>
	ilk (1) S595	2	12.0	-	🕂 O <u>t</u> her
2.1 Grou	ping	1	10.0	-	+ C <u>u</u> stom
					Remove Item
					Wennove Item
		1	1		-
TO PAY		UGX	10	2	🛉 Pa <u>v</u> ment
09/11/20			110.0		🛉 <u>R</u> efund
09/11/20	21 17:44		-80.0	-	Payment Receipt
					Remo <u>v</u> e Payment
					🚽 Give Change
					💾 <u>S</u> ave
					√ P <u>a</u> id
BALANCI	E	UGX	7	2	🖉 <u>C</u> lose

The relation of a bill with a patient admission is found in the last column in "Patient Bills Management" window:

он						Pa	tient Bills Ma	anagemer	it						_ 🗆 X
	admin 🔻	<u>T</u> oday	Date Fror	n: 09/11/2	2021	🛅 Date To	: 09/11/2021	. 📅 🛛	ecember	▼ 2022	*			8	
Bills	Pending	Closed													
USER	ID	DATE		PAT. ID			PATIENT			AMOUNT	LAST PAYN	MENT	STATUS	BALANCE	IN/OUT
admin	47	09/11/2021	18:29	540	Redy	Villen				80.0	09/11/2021	18:30	С		0.
admin	46	09/11/2021	17:44	539	Philon	nena Redondo				102.0	09/11/2021	17:44	0	7	
admin	45	09/11/2021	17:22	537	Wally	Simpsons				60.0	09/11/2021	17:22	С		0.0
admin	44	09/11/2021	15:40	535	Kenny	/ Flanagan				151.0	09/11/2021	15:41	С		0.0
admin	43	09/11/2021	15:39	534	Mirta	Veluma				80.0	09/11/2021	15:39	0	3	0.0

6.2.3 Delete a Bill (Delete Bill)

To delete an existing bill, select the bill in the *Patient Bills Management* window and press the **Delete Bill** button. The *Delete* window is shown:





Generally, this functionality is not allowed for regular users and should be performed only by the Administrator.

6.2.4 Receipt (Receipt)

A bill receipt can be printed directly from the *Patient Bills Management* window. Highlight the bill and click the **Receipt** button. A proper printer device must be connected to the system.

6.2.5 Reports (Report)

The Open Hospital accounting module comes with a set of reports hereby listed:

- Today (Closure): a report that shows the current user incomes
- Today: a report that shows a statement with all paid and unpaid bills for today
- **Period**: a report that shows a statement with all paid and unpaid bills within the period currently selected
- This month: a report that shows a statement with all paid and unpaid bills within the current month
- **Select month**: a report that shows a statement with all paid and unpaid bills within the specified month
- **Patient's Statement**: a report that shows a statement with all paid and unpaid bills for the selected patient



For each report, except Today (Closure), one of the following options must be chosen:

- **Short Report (only BadDebts bills)**: a report that shows a statement with only the unpaid bills and the total for the others
- Full Report (all bills): a report that shows a statement with all paid and unpaid bills

~	Information	8
r	Please select a report.	
	Short Report (only BadDebt bills)	•
	OK Cancel	

Once the choice has been made, after some time the JasperViewer® will show the generated report as follows:

				5	St. Luke H	OSPITAL -	Angal
				P.O.		NEBBI - A al@ucmb. 56 04726	ug.co.
Pe	eriodical In	comes/Billed and	l Receiva	ables Rej	port(with	pendin	g
		r	eport fro	om 20/11	./2020 TC) 20/11/	2020
Bi	ll ID Date	Patient	Amount	Last Payment	Paid	Balance	Statu s
24	(20/11/20)	151 - Lien Notter	136.00	20/11/2020		136.00	0
2	(20/11/20)	245 - Vanish Katrina	28.00	23/11/2020		-2.00	0
3	(20/11/20)	503 - Charlie Sturgeon	10.00	20/11/2020	120.00	-110.00	0
4	(20/11/20)	445 - Rodolfo Scoggins	68.00	20/11/2020		68.00	0
5	(20/11/20)	125 - Kristie Muldoon	64.00	20/11/2020		64.00	0
6	(20/11/20)	301 - Noe Kruse	12.00	20/11/2020	80.00	-68.00	0
7	(20/11/20)	167 - Richard Gauldin	26.00	20/11/2020		26.00	0
8	(20/11/20)	141 - Brandie Lutz	180.00	23/11/2020	500.00	-70.00	0
9	(20/11/20)	191 - Leonard Badgett	46.00	20/11/2020	80.00	-34.00	0
10	(20/11/20)	180 - Brock Boyter	145.00	23/11/2020	50.00	145.00	0
11	(20/11/20)	189 - Jake Tibbetts	224.00	20/11/2020	150.00	74.00	0
12	(20/11/20)	514 - Mario Rossi	46.00	20/11/2020		46.00	0
			985.00] [980.00	275.00]



By default, an internal PDF viewer is used. An external PDF reader can be used by modifying the INTERNALVIEWER flag in the configuration file. Ask the Administrator or refer to the *Administrator's Guide*.

The PDF report can be saved by clicking on the save button (\square). The report can also be printed by clicking on the print button (\oiint).



A PDF copy of every report is always saved within the folders of Open Hospital. Ask the Administrator or refer to the *Administrator's Guide*.

6.3 Functions of Accounting in Multi-user Mode

In multi-user mode, the Incomes Table will show only the Incomes for the logged user:

Patient Bills Management											,				
	admin 🔫	<u>T</u> oday	Date From	n: 09/11/2	021	📅 Date To	o: 09/11/20	21	December	▼ 2022	* *			8	
Bills	Pending	Closed													
USER	ID	DAT	E	PAT. ID			PATIENT			AMOUNT	LAST I	AYMENT	STATUS	BALANCE	IN/OU
admin	47	09/11/2021	18:29	540	Redy \	/illen				80	.0 09/11/2	21 18:30	С	().0 🛌
admin	46	09/11/2021	17:44	539	Philom	ena Redondo	0			102	.0 09/11/2	021 17:44	0	72	2.0
admin	45	09/11/2021	17:22	537	Wally 9	Simpsons				60	.0 09/11/2)21 17:22	С	().0
admin	44	09/11/2021	15:40	535	Kenny	Flanagan				151	.0 09/11/2	21 15:41	С	(0.0
admin	43	09/11/2021	15:39	534	Mirta \	/eluma				80	.0 09/11/2	21 15:39	0	30	0.0
		The applica)						_				
	bo wi	ottom panel t ith the amou AID for TOE	the Income Ints PAID a	es Table and NOT the time)				shows the for TO	ncomes Tab he amount P DAY and wit ERIOD for th lected user.	AID hin				
	bo wi	ottom panel t ith the amou AID for TOE	the Income ints PAID a DAY within DD selecter	es Table and NOT the time		JGX		0	shows the for TO	he amount P DAY and wit ERIOD for th	AID hin	I Rec	reipt	Report	Close

So, the **Incomes Table** will show the following information:

- First Row: the PAID and UNPAID for Today
- Second Row: the PAID and UNPAID for the specified Period
- Third Row: the PAID and UNPAID for the current user for Today

The Administrator, or any enabled user (See User & Groups), can filter all incomes for all users with a payment amount:

OH Patient Bills Management _ 🗆 🗙																
	admin 👻	<u>T</u> oday D	ate From	09/11/2	2021 🛅	Date To:	09/11/2021	1 5 C	ecember)	r 🔻 🗧 2022	2 +				8	
Bills	Pending	Closed														-
USER	ID	DATE		PAT. ID			PATIENT			AMOUNT		LAST PAYM	1ENT	STATUS	BALANCE	IN/OUT
admin	47	0 2021 1		540	Redy Villen						0.0 (9/11/2021		С		.0
admin	46		7:44	539	Philomena	Redondo				102	2.0 (9/11/2021	17:44	0	72	.0
admin	45	09/11	7:22	537	Wally Simps	sons				60	0.0 (9/11/2021	17:22	С	C	.0
admin	44	09/11/2	N	535	Kenny Flan	agan				151	1.0 (9/11/2021	15:41	С	C	.0
admin	43	09/11/20		534	Mirta Velun	na				80	0.0 0	9/11/2021	15:39	0	30	.0
		in	volved in s	some pa	yment.											
	day: UGX riod: UGX oday:		371	Not Paio Not Paio admin P	: UGX		10	02	w Bill	<u>E</u> dit Bill	<u>D</u> e	lete Bill	Rece	i <u>p</u> t	<u>R</u> eport	<u>C</u> lose

7 Vaccines (<u>V</u>accines)

7.1 Main Characteristics

The vaccines functions are used to manage vaccines for all the registered patients. It is possible to register vaccinations, modify or delete them. A specific search function is also available.

Click with the mouse on the button or press "Alt + V" to enter the **Patient Vaccine Browser** window

он	_ ×
	User: admin
	OPD
	<u>P</u> harmacy
	<u>L</u> aboratory
	<u>A</u> dmission/Patient
	Accounting
	S <u>t</u> atistics
	Vaccines
KMATICI A TOTAE	<u>W</u> orksheet
INJO 1 NJO	<u>R</u> eports
TAL	<u>S</u> ettings
DPEN	<u>H</u> elp
ō	Logout

7.2 Functions of Vaccines

All functions available under <u>Vaccines</u> are accessible from the window *Patient Vaccine Browser* window, shown below.

By default, the window shows in the **Data table** all the vaccinations added to the system in the last week.

~		Patient Vaccine Bro	wser			8
Select a vaccine type	DATE	PATIENT	SEX	AGE	VACCINE	VACCINE TYPE
All Type 👻						
Select a vaccine						
All vaccines 🔻						
Date From: 27/04/2022						
Date To: 27/04/2022						
Age From: 0						
Age To: 0						
Select Sex						
🖲 All 🔾 Male 🔾 Female						
<u>S</u> earch						
Count: 0						
		<u>N</u> ew <u>E</u> dit <u>D</u>	elete	<u>C</u> lose		

The following functions are accessible from the **Buttons panel** of the **Patient Vaccine Browser** window:

- <u>N</u>ew: insert a new vaccination.
- **<u>E</u>dit**: modify a stored vaccination.
- **<u>D</u>elete**: delete a stored vaccination.
- **<u>C</u>lose**: exit from the *Patient Vaccine Browser* window and return to the main menu.

Furthermore, there is a search function available in the **Selection panel** on the left of the window.

7.2.1 Search Vaccinations

Queries about vaccinations can be done using the search criteria available in the **Selection panel** area of the window (left side of the window). The results of the search are shown in the **Data table** area.

Vaccinations can be selected by choosing specific field values from the following list:

- Vaccine type: selection of a vaccine type to filter the vaccines list
- Vaccine: select a specific vaccine or all vaccines with "All vaccines"
- Date: "Date: From" and "Date: To" subsets the vaccinations to a specific time period
- Age: "Age From" and "Age To" subsets the patients subject to vaccinations by an age range
- Sex: All / Male / Female



Vaccine Types and Vaccines can be defined by the Administrator. Ask the

After the selection, press the **Search** button; the system shows in the **Data table** the results of applying the search criteria requested.

The function also shows in the field "Count:" the number of vaccinations that are shown in the **Data table** (in the example, there are 26).

~		8			
Select a vaccine type	DATE	SEX	AGE	VACCINE	VACCINE TYPE
Select a vaccine type	15/03/2021	М	1	POLIO 1 C	Child
All Type 👻	15/03/2021		37	TT VACCINE DOSE 2	Pregnant
Аптуре	15/03/2021		35	TT VACCINE DOSE 3	Pregnant
	15/03/2021		54	TT VACCINE DOSE 4	Pregnant
Select a vaccine	23/11/2020		57	POLIO 3 C	Child
	23/11/2020		50	TT VACCINE DOSE 2	Pregnant
All vaccines 💌	23/11/2020	M	14	MEASLES	Child
	22/11/2020	M	2	POLIO 3 C	Child
Date From: 19/07/2001	21/11/2020	F	6	POLIO 1 C	Child
	21/11/2020	M	2	MEASLES	Child
Date To: 26/07/2021	21/11/2020		51	POLIO 2 C	Child
	21/11/2020		52	TT VACCINE DOSE 3	Pregnant
Age From: 0	20/11/2020	F	29	TT VACCINE DOSE 2	Pregnant
	20/11/2020	F	1	DPT 2 - HepB + Hib 1	Child
Age To: 0	20/11/2020		41	DPT 3 - HepB + Hib 1	Child
	20/11/2020	F	2	POLIO 1 C	Child
Select Sex	20/11/2020	F	2	DPT 2 - HepB + Hib 1	Child
	20/11/2020	F	41	DPT 3 - HepB + Hib 1	Child
🖲 All 🔾 Male 🔾 Female	20/11/2020	F	42	TT VACCINE DOSE 2	Pregnant
	20/11/2020	F	6	MEASLES	Child
Search	20/11/2020		16	BCG	Child
	20/11/2020		79	TT VACCINE DOSE 5	No pregnant
Count: 26	20/11/2020	М	33	TT VACCINE DOSE 4	Pregnant
	20/11/2020		13	BCG	Child
	20/11/2020		35	POLIO 3 C	Child
	19/11/2020	М	30	TT VACCINE DOSE 3	No pregnant
		N	ew <u>E</u> dit <u>D</u> elete	<u>C</u> lose	

7.2.2 Insert a New Patient Vaccination (New)

This function is used to register a new patient vaccination.

Press the <u>New</u> button in the *Patient Vaccine Browser* window to access the *New Patient Vaccine* window, shown below.

~	New Patient Vaccine									
Date	13/04/2022 TS Progressive 27									
Search Patient	Select a patient	-								
Vaccine Type	All Туре	-								
Vaccine	All vaccines	-								
Patient's Data										
Name	Age Sex (M/F)									
	<u>O</u> K <u>C</u> ancel									

To record a new patient vaccination, enter the following fields:

• Date: the date of the vaccination

- **Progressive**: the progressive number in the year (set automatically by the system)
- Patient: select the patient by entering the Patient code or alternatively selecting a patient
- Vaccine Type: the Vaccine Type
- Vaccine: the vaccine



Vaccine Types and Vaccines can be defined by the Administrator. Ask the Administrator or check the <u>Settings</u> chapter.

When all the required information is entered, the **Buttons panel** has the following choices:

- **<u>O</u>K**: confirm the data and record the patient vaccination.
- <u>Cancel</u>: close the window and return to the *Patient Vaccine Browser* window without recording the patient vaccination,

7.2.3 Modify Data of a Recorded Patient Vaccination (Edit)

To modify data of a patient vaccination, select the vaccination in the *Patient Vaccine Browser* window and then press the <u>Edit</u> button. When the *Edit Patient Vaccine* window is shown, the record is available for changes. Date, vaccine type, and the vaccine can be changed:

~	Edit Patient Vaccine						
Date	21/11/2020	Progressive 16					
Search Patient		Shultz Ardis 💌					
Vaccine Type	Child	-					
Vaccine	POLIO 2 C	-					
Patient's Data-	Patient's Data						
NameShultz ArdisAge51Sex (M/F)F							
<u>O</u> K <u>C</u> ancel							

All the data for the vaccination can be changed except for the patient associated with the vaccination.

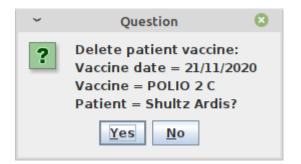
Once all the changes are made, the **Buttons panel** has the following choices:

- **O**K: confirm the new values (all the previous values will be lost).
- <u>Cancel</u>: close the window and return to the *Patient Vaccine Browser* window without changing any values.

7.2.4 Delete a Patient Vaccination (Delete)

To delete a stored patient vaccination, select the vaccination in the table in the *Patient Vaccine Browser* window. Next, press the **<u>D</u>elete** button. The confirmation window is shown. The

vaccination can then be deleted. Deleted vaccinations are no longer available.



7.3 Vaccines Extended (Vaccines)

The vaccine functionality can be extended by changing the *PATIENTVACCINEEXTENDED* flag in the configuration file. Ask the Administrator or refer to the *Administrator's Guide*.

7.3.1 Extended Vaccine Browsing

DATE 5/03/2021 5/03/2021 5/03/2021 5/03/2021 5/03/2021 5/03/2020 3/11/2020 3/11/2020 3/11/2020 3/11/2020	PATIENT Vessin Jordan Genina Justterin Anthon Geremy Marcus Kellop Heard Elna Orbison An Horwitz Stuart	SEX M F M M M F F F F F F	AGE 1 37 35 54 57 50	VACCINE POLIO 1 C TT VACCINE DOSE 2 TT VACCINE DOSE 3 TT VACCINE DOSE 4 POLIO 3 C	VACCINE TYPE Child Pregnant Pregnant Pregnant Child
5/03/2021 5/03/2021 5/03/2021 8/11/2020 8/11/2020 8/11/2020	Genina Justterin Anthon Geremy Marcus Kellop Heard Elna Orbison An	F M M M	35 54 57	TT VACCINE DOSE 2 TT VACCINE DOSE 3 TT VACCINE DOSE 4 POLIO 3 C	Pregnant Pregnant Pregnant
6/03/2021 6/03/2021 8/11/2020 8/11/2020 8/11/2020	Anthon Geremy Marcus Kellop Heard Elna Orbison An	M M M	35 54 57	TT VACCINE DOSE 3 TT VACCINE DOSE 4 POLIO 3 C	Pregnant Pregnant
3/03/2021 3/11/2020 3/11/2020 3/11/2020	Marcus Kellop Heard Elna Orbison An	M	54 57	TT VACCINE DOSE 4 POLIO 3 C	Pregnant
8/11/2020 8/11/2020 8/11/2020	Heard Elna Orbison An	M	57	POLIO 3 C	
8/11/2020 8/11/2020	Orbison An				Child
8/11/2020				TT VACCINE DOSE 2	Pregnant
		M	14	MEASLES	Child
	Rochester Lenny	M	2	POLIO 3 C	Child
/11/2020	Lounsbury Valda	F	6	POLIO 1 C	Child
					Child
					Child
					Pregnant
					Pregnant
					Child
			-		Child
					Child
					Child
		F			Child
					Pregnant
					Child
					Child
					No pregnant
					Pregnant
					Child
					Child
					No pregnant
	/11/2020 /11/2020 /11/2020 /11/2020 /11/2020 /11/2020 /11/2020 /11/2020 /11/2020 /11/2020 /11/2020 /11/2020 /11/2020 /11/2020 /11/2020 /11/2020 /11/2020	11/2020 Shultz Ardis /11/2020 Madaline Mincks /11/2020 Ciancio Michale /11/2020 Batman Camelia /11/2020 Batman Camelia /11/2020 Ali Norman /11/2020 Ali Norman /11/2020 Nerina Vernell /11/2020 Nerina Vernell /11/2020 Saucedo Hortense /11/2020 Deschamp Shonda /11/2020 Andrepont Golden /11/2020 Veloz Su /11/2020 Abdul Burton /11/2020 Mcsherry Mortimer /11/2020 Mcsherry Mortimer	11/2020 Shultz Ardis F /11/2020 Madaline Mincks F /11/2020 Ciancio Michale F /11/2020 Batman Camelia F /11/2020 Batman Camelia F /11/2020 Batman Camelia F /11/2020 Ali Norman M /11/2020 Nerina Vernell F /11/2020 Jeana Bennett F /11/2020 Saucedo Hortense F /11/2020 Deschamp Shonda F /11/2020 Veloz Su F /11/2020 Veloz Su F /11/2020 Veloz Su F /11/2020 Mesnry Mortimer M /11/2020 Mesnry Mortimer M /11/2020 Mernhew Pamila M	11/2020 Shultz Ardis F 51 /11/2020 Madaline Mincks F 52 /11/2020 Ciancio Michale F 29 /11/2020 Batman Camelia F 1 /1/2020 Batman Camelia F 1 /1/2020 Ali Norman M 41 /1/2020 Erdmann Dustin F 2 /1/2020 Nerina Vernell F 41 /1/2020 Jeana Bennett F 41 /1/2020 Saucedo Hortense F 42 /1/2020 Deschamp Shonda F 6 /11/2020 Andrepont Golden M 16 /11/2020 Veloz Su F 79 /11/2020 Abdul Burton M 33 /11/2020 Mcsherry Mortimer M 13 /11/2020 Merrihew Pamila M 35	11/2020 Shultz Ardis F 51 POLIO 2 C /11/2020 Madaline Mincks F 52 TT VACCINE DOSE 3 /11/2020 Ciancio Michale F 29 TT VACCINE DOSE 2 /11/2020 Batman Camelia F 1 DPT 2 - HepB + Hib 1 /1/2020 Batman Camelia F 2 POLIO 1 C /1/2020 Ali Norman M 41 DPT 3 - HepB + Hib 1 /1/2020 Rerina Vernell F 2 DPT 2 - HepB + Hib 1 /1/2020 Nerina Vernell F 41 DPT 3 - HepB + Hib 1 /1/2020 Jeana Bennett F 41 DPT 3 - HepB + Hib 1 /1/2020 Jeana Bennett F 42 TT VACCINE DOSE 2 /1/2020 Deschamp Shonda F 6 MEASLES /1/2020 Andrepont Golden M 16 BCG /11/2020 Veloz Su F 79 TT VACCINE DOSE 5 /11/2020 Mcsherry Mortimer M 33 TT VACC

The extended version of the window looks like the following:

The only difference is that there is a new column containing the name of the patient.

8 Admission/Patient (Admission/Patient)

8.1 Main Characteristics

The Admission/Patient functionality allows registering a new patient, modifying their personal details, browsing their history, and admitting them to a hospital ward.

Click with the mouse on the button or press "Alt + A" to enter the **Patient Browser** window

он	_ ×
	User: admin
	<u>O</u> PD
	<u>P</u> harmacy
	<u>L</u> aboratory
	<u>Admission/Patient</u>
	Accounting
	S <u>t</u> atistics
	<u>V</u> accines
MATICI	<u>W</u> orksheet
INDEL	<u>R</u> eports
TAL	<u>S</u> ettings
OPEN	<u>H</u> elp
ō	<u>L</u> ogout



An OPD registration can be started from here if the OPDEXTENDED flag is set to YES. Ask the Administrator or refer to the *Administrator's Guide*.

8.2 Functions of Admission/Patients

All the functions available under <u>Admission/Patient</u> are accessible from the *Patient Browser* window, shown below.

By default, the window shows a **Data table** all of the patients currently present in the system.

		Patient E	rowser			
	CODE	NAME	AGE	SEX	CITY / ADDRESS / TELEPHONE / NOTE	WARD
Admission Status	542	Jeff Buskey	21y 9m 2d	М	Kernigan - Ruster Street 27 - +851344333	MALE WARD
All 👻	541	Philomena Jenkins	38y 6m 25d	F	Wellington - Western park N. 23 - +72145462545	
	540	Redy Villen	43y 11m 1	F	Bloomingdale - Willer road 81 - + 393134341	FEMALE WARD
Ward	539	Philomena Redondo	40y 5m 27d	F	Muoni - Westfiled district - +180287435746545	FEMALE WARD
CHILDREN WARD	538	Veronica Erini	2y 10m 10d	F	Uroha - New place 1 - +2154215434314	
FEMALE WARD	537	Wally Simpsons	46y 8m 18d	М	New Village - Remsy Av. 1 - +394331112313	
	536	Geofrey Adenilson	53y 0m 11d	М	Juskey - Jefferson lane 258 - +1443521111	
MALE WARD	535	Kenny Flanagan	56y 7m 23d	М	Wally - First Avn. 762 - +123451354	
MATERNITY WARD	534	Mirta Veluma	41y 8m 18d	F	Alimbu - Ambalony way - +39432313123	
Count: 490	533	Jennifer Stantson	26y 8m 10d	F	Madison - Fersy Plaza 1 - + 39	FEMALE WAR
	532	Kevin Aramburu	44y 2m 23d	М	Medington - St. Regents Road 45 - +21.112431545	
ge	531	Maximilian Huntis	56y 1m 25d	М	Restiville - Wilson road 51 - +2-23131312	
From: To:	530	Jeanina Smith	25y 7m 0d	F	Springfield - Flanders Rd - +12443111	
	529	Sara Hucklington	2y 10m 26d	F	Kulele - Long Road 1 - + 39	
ex	528	Kenty Willis	16y 6m 8d	F	Jikney - Furja Street 81 - +3914413	
	527	Marcus Kellop	54y 11m 9d	м	Mirly - Fullister Pl. 45/b - +396153134	
II 🔽	526	Genina Justterin	38y 1m 10d	F	Uribe - Ghoulam Rd 231 - +393452432	
	525	Mary Garrington	2y 5m 4d	F	Kendring - Ganston - + 393413231	
	524	Geremia Dickinson	69y 5m 18d	м	Kellog - Springfiled - +396131211	
	523	Quinlan Coors	8y 5m 20d	м	Derbyshire - Frankin St 12 - +416824999	
	522	Harry Colterson	63y 11m 1	м	Ottey - Westeman St. 12 - +912314411	MALE WARD
	521	Betta Jamison	12y 5m 2d	F	Kensington - Kinney Rd. 43 - +39	
	520	Rochester Lenny	2y 9m 30d	М	Warengton - Letterman St. 512 - +005199944	
	519	Jeanna Rickember	5y 7m 16d	F	Justin - Lavon Road 62 - +2243143213	
	518	Jeremy Lindon	60y 0m 20d	М	Misurel - Stenton Plaza 151 - +394252422	
	517	Maria Njoko	22y 5m 23d	F	West Kurtika - Mongi Road 56 - +2434\334	
	516	Genna Susterlind	47y 8m 3d	F	Rudkenny - Genev Road 77 - + 3813144111	
earch Key	515	Alvaro Robertson	13y 8m 10d	М	Guarinton - Courtney ST. 27 - +39	
	514	Mario Rossi	30y 2m 13d	м	Roma - Via Verdi - + 397653431	
	513	Makenzie Everton	29y 8m 5d	м	Albrington - Wayland 21 - + 3924534314	
New Edit Delete Admission	Examination	OPD Laborator	v Bill D	ata	Imaging Clinical Sheet Therapy	Merge Clos



If the list of patients becomes very large, it is likely to result in a slowdown of the system, depending on the network settings. It is possible to optimize the use of memory by changing the flag ENHANCEDSEARCH in the configuration file. Ask the Administrator or refer to the *Administrator's Guide*.

The following data are shown in the *Patient Browser* window:

- **Code**: the patient's code (automatically generated by the application)
- Name: the patient's full name
- Age: the patient's age in years, months, and days
- Sex: the patient's sex
- City / Address / Telephone / Note: all this information separated by a "-"
- Ward: the ward where this patient is currently admitted; this field is blank if the patient is not admitted to the hospital at the current time

The following functions are accessible from the **Buttons panel** of the window **Patient Browser** window:

- <u>N</u>ew: insert a new patient.
- **<u>E</u>dit**: modify an existing patient.
- **Delete**: delete an existing patient.
- **<u>Admission</u>**: manage the admission of the patient in the hospital.
- **E**<u>x</u>**amination**: manage the patient examination.
- **<u>O</u>PD**: start an OPD visit on the selected patient.
- **Laboratory**: start a new laboratory exam on the selected patient.
- **<u>B</u>ill**: start a bill on the selected patient.
- **Data**: modify data for a patient, including the history of their admissions/out of patient visits as well as their malnutrition data.
- Clinical Sheet: analyze the clinical sheet of a patient and print it.

- Therapy: manage the therapy of a patient.
- **<u>C</u>lose**: exit from the **Patient Browser** window and return to the main menu.



It is possible to have an **Imaging** function that allows for loading and viewing of image files for the selected patient by changing the flag DICOMMODULEENABLED in the configuration file. Ask the Administrator or refer to the *Administrator's Guide*.



It is possible to have a **Merge** function that can be used in the case of double patient registration, by changing the flag MERGEFUNCTION in the configuration file. Ask the Administrator or refer to the *Administrator's Guide*.

Furthermore, a search function is available using the **Selection panel** on the left of the window.

8.2.1 Search Patient

Queries about patients can be done using the search criteria available in the **Selection panel** area of the window (left side of the window). The results of the search are shown in the **Data table** area.

Patient selection can be accomplished by specifying a specific value for the fields in the following list:

- Admission Status. The choices are:
 - All: all patients are included in the selection
 - Admitted: only patients admitted are included in the selection
 - Not Admitted: only patients not admitted are included in the selection
- Ward. Select one or more wards:
 - Children Ward
 - Female Ward
 - Male Ward
 - Maternity Ward
- Age. specify the patient's age range
- Sex. specify the patient's gender:
 - All
 - Male
 - Female
- Search Key Any character string entered is matched against the patient's name and address. A complete string or only some characters can be entered, and the system will show all the patients matching the string. For example, entering, "isabe", will result in all patients who have "isabe" in their name being selected and displayed; so both "Glennis Isabelle" and "Isaiah Isabelle" are shown.

		Patier	t Browser			- 0 (
	CODE	NAME	AGE	SEX	CITY / ADDRESS / TELEPHONE / NOTE	WARD
Admission Status	488	Glennis Isabelle	6y 10m 9d	F	Grove - Downers	
All 👻	317	Isaiah Isabelle	72y 10m 9d	М	GA - Cartersville	
Ward						
CHILDREN WARD						
FEMALE WARD						
MALE WARD						
MATERNITY WARD						
Count: 2						
Age						
From: To:						
Sex						
All 👻						
Search Key						
sabe						
New Edit Delete	Admissio	n E <u>x</u> amination <u>O</u>	PD Bill	Data	Clinical Sheet Therapy Merge	Close



Wards can be defined by the Administrator. Ask the Administrator or check the Settings chapter.

8.2.2 Search Patient Enhanced

When the number of registered patients becomes huge, memory usage can be optimized by changing the *ENHANCEDSEARCH* flag in the configuration file. Ask the Administrator or refer to the *Administrator's Guide*.

Once the enhanced search has been enabled, the new **Patient Browser** window looks like the following:

		Patient Bro	wser						_ 0
Admission Status	CODE	NAME	AGE	SEX	C	ITY / ADDRESS / TELEF	HONE / NOTE		WARD
All 👻									
Ward									
CHILDREN WARD									
FEMALE WARD									
MALE WARD									
MATERNITY WARD									
Count: 0									
Date									
Admission Date *									
From: To:									
Discharge Date									
From: 🔢 To:									
Age									
From: To:									
Sex									
All									
Search Key									
New Edit Delete Admission	Examination	<u>OPD</u> <u>L</u> aboratory	Bill	Da <u>t</u> a	Imaging	Clinical <u>S</u> heet	T <u>h</u> erapy	Merge	Close

Initially, the list is empty. To show some patients, enter a search criterion in the **Search Key** field and then press the search (\mathbb{Q}) button and the window will show only patients matching the specified criteria.

он		Patient Brov	vser			_ 🗆 ×
	CODE	NAME	AGE	SEX	CITY / ADDRESS / TELEPHONE / NOTE	WARD
Admission Status	488	Isabelle Glennis	8y 5m 5d	F	Grove - Downers Rd south - +34123443	
All	317	Isaiah Isabelle	74y 8m 20d	M	Gary Town - Cartersville district 5 - +45211111	
All Ward CHILDREN WARD FEMALE WARD MATERNITY WARD Count: 2 Date Admission Date * From: Discharge Date From: To: Sex All	480	Isalah Isabelle	74y 8m 20d		GGary Town - Cartersville district 5 - +4521111	
Search Key						
isabe						
<u>N</u> ew <u>E</u> dit <u>D</u> elete <u>A</u> dmission	E <u>x</u> amination	<u>O</u> PD <u>L</u> aboratory	<u>B</u> ill D	a <u>t</u> a	Imaging Clinical Sheet Therapy Mo	erge <u>C</u> lose

Moreover, further search criteria are added in this mode:

- Admission Date: search for all patients admitted in between the specified dates, regardless if they are still admitted or not
- **Discharge Date**: search for all patients discharged in between the specified dates, regardless if they were admitted again later on



To show the full patient list again, just press the search button with an empty search criterion.

8.3 Insert a New Patient (New)

This function is used to register a new patient into the hospital.

Press the <u>New</u> button in the *Patient Browser* window to access the *New Patient* window, shown below.

~	New Patient	8
	Insert data for a new patient	
First Name *	Note	
Second Name *		
Age *		=
Sex * 🖲	Male 🔾 Female	
Address		
City		
Next of Kin		
Telephone		• •
	<u>O</u> K <u>C</u> ancel	

To record a new patient, enter the following fields:

- First Name: the patient's first name
- Second Name: the patient's last name or other names
- Age: the patient's age in years
- Sex: the patient's sex: male or female
- Address: the address of where the patient lives
- City: the city where the patient lives
- Next of Kin: the name of the patient's closest relative
- Telephone: the patient's telephone number
- Note: a free text for adding notes about the patient

When data entry has been completed, observe that the **Buttons panel** has two choices:

- **<u>O</u>K**: confirm the data and add the patient's record.
- **Cancel**: close the window and return to the **Patient Browser** window without adding the patient.

8.3.1 Modify Data of a Patient (Edit)

To modify the data of a patient, select the patient in the *Patient Browser* window and then press the <u>Edit</u> button. When the *New Patient* window is shown, the record is available for changes. All

the data can be changed.

~	Edit Patient	8				
	Genina Justterin					
First Name *	Genina					
Second Name *	Justterin					
Age *	37	=				
Sex * 🔾	Male 🖲 Female					
Address	Ghoulam Rd 231	_				
City	Uribe					
Next of Kin						
Telephone	+393452432					
	<u>O</u> K <u>C</u> ancel					

When modification of the data has been completed, observe that the **Buttons panel** has two choices:

- **<u>O</u>K**: confirm the new values (all the previous values will be lost).
- **Cancel**: close the window and return to the **Patient Browser** window without changing the patient's data.

8.3.2 Delete a Patient (Delete)

To delete a stored patient, select the patient in the *Patient Browser* window. Next, press the **Delete** button. The name of the patient is shown in the *Question* window below: by pressing "yes", the patient's data is deleted. Deleted information is no longer available in the system. *The patient is not completely removed from the system; ask the Administrator to restore the data if needed.*



In the **Buttons panel**, the choices are:

- **<u>Y</u>es**: confirm the deletion of the patient.
- No: close the window and return to the previous window.

8.4 Insert a new Patient Extended (New)

The New Patient functionality can be extended by changing the *PATIENTEXTENDED* flag in the configuration file. Ask the Administrator or refer to the *Administrator's Guide*.

8.4.1 Additional Features

The N	Jew	Patient	Extended	module	affords	the f	following	improvements:
THC T		I attoitt	Linconaca	module	anorao	uic i	lono wing	miprovenienco.

	New Patient	×
Insert data for a i		Patient Photo
First Name *	Blood Type Unknown 🔽	
Second Name *	Marital Status	
Tax Number ID	Profession	
Age *	Unknown	
Age	Father's Name	<u>N</u> ew Photo <u>F</u> ile
Years 0 Months 0 Days 0		Note
	🔾 Dead 🖲 Unknown 🔷 Alive	^
Sex * 🔾 Male 🔾 Female	Mother's Name	
Address		
City	O Dead O Unknown O Alive	
Next of Kin	Parents are together	
Telephone +39	Has Insurance	
* Indicates required fields	⊖Yes ⊖No ⑧Unknown	-
Ōĸ	Ana <u>m</u> nesis <u>C</u> ancel	

To record a new patient, the following fields are available:

- Tax Number ID: is the national ID or other ID that uniquely identifies the patient
- Age / BirthDate / Description: the age can be specified in three different ways:

Age *	Age *	Age *
Age BirthDate Description	○ Age	○ Age ○ BirthDate
Years 0 Months 0 Days 0	Birth Date 12/03/2000 13 22y 2m 22d	Early Childhood 🔻 🛛 👻 Months

Regardless of how it is entered, the age is converted to an age in years in the *Patient Browser* window.

The date picker includes a "Clear" option (lower right corner) to remove or clear



	<<	<	Ju	ne 20	22	>	>>
	Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3	4
	5	6	7	8	9	10	11
	12	13	14	15	16	17	18
	19	20	21	22	23	24	25
	26	27	28	29	30		
	Tod	ay: Ju	JN 3,	2022		С	lear
irrent date value.							

- BloodType: valid values are 0+, A+, B+, AB+, 0-, A-, B-
- **Marital Status**: valid values are Single, Married, Divorced, and Widowed. If left empty, the default is Unknown
- **Profession**: valid values are Other, Farming, Construction, Medicine, Food/Hospitality, Homemaker, Mechanic, Business, Janitorial Services, Mining, and Engineering. If left empty, the default is Unknown
- Father's Name: specify the name of the patient's father and if he is still alive
- Mother's Name: specify the name of the patient's mother and if she is still alive
- Parents Together: specify if the parents are still together
- Has Insurance: specify if the patient has a health financial protection plan (insurance)
- Load File: a button used to load a patient's picture (which will be cropped and squared)



Age Types (Descriptions) can be defined by the Administrator. Ask the Administrator or check the <u>Settings</u> chapter.

8.4.2 Height and Weight Functionality (Height and Weight)

The height and weight of the patient are not required when registering a new patient. It is done through the examination module available in the *Patient Browser* window.

8.4.3 Patient Photo (New Photo)

The New Patient functionality can be extended by changing the <u>VIDEOMODULEENABLED</u> flag in the configuration file. Ask the Administrator or refer to the *Administrator's Guide*.

Once the video module has been enabled, the *New Patient* window looks as follows:

John Smith (Code: 4) First Name * John Second Name * Smith Tax Number ID Pati	ent Photo
Tax Number ID	
Age * Unknown Age BirthDate Description Father's Name	lew Photo <u>F</u> ile
Birth Date 22/12/2012	
Sex * Male Female Address Dead Unknown Alive	
City Parents are together	
Next of Kin O Yes No Unknown Telephone +39 Has Insurance	
* Indicates required fields OK Anamnesis Cancel	_

By clicking on the <u>New Photo</u> button, the webcam should be activated (check for any lights on the device). The **Patient Photo** window should show what the camera is pointing at.

он	New Patient	×
Insert data for a I		Patient Photo
First Name *	Blood Type	
	Unknown 💌	
Second Name *	Marital Status	A ALBERT
	Unknown 💌	
Tax Number ID	Profession	
Age *	Unknown	
Age BirthDate Description		
	Father's Name	<u>New Photo</u> <u>F</u> ile
Years 0 Months 0 Days 0		Note
	🔾 Dead 🖲 Unknown 🛛 Alive	
Sex * O Male O Female	Mother's Name	
	Mother's Name	
Address		
	🔾 Dead 🖲 Unknown 🛛 Alive	
City	Parents are together	
Next of Kin	Ŭ,	
	🔾 Yes 🔾 No 🖲 Unknown	
Telephone +39	Has Insurance	
100	⊖Yes ⊖No ®Unknown	
* Indicates required fields		
	<u>O</u> K <u>C</u> ancel	

Amiaparwoth Tracy (Code: 544) First Name * Amiaparwoth Second Name * Tracy Marital Status Single • Marital Status Single • Profession Unknown • Age * Unknown • Age * Description Birth Date 14/12/2020 Zy 0m 0d Dead • Unknown • Alive Address Padolo City Padel Next of Kin • Yes • No • Unknown Telephone +39 * Indicates required fields OK	он	Edit Patient	×
Tax Number ID Age * Age @ BirthDate O Description Birth Date 14/12/2020 2y 0m 0d Sex * Male @ Female Address Padolo City Padel Next of Kin Telephone + 39 * Indicates required fields		Blood Type	Patient Photo
Age * Age @ BirthDate Description Birth Date 14/12/2020 2y 0m 0d Sex * Male Female Address Padolo City Padel Next of Kin Telephone +39 * Indicates required fields		Single 🔻	
Birth Date 14/12/2020 2y 0m 0d O Dead (a) Unknown (c) Alive Sex * (c) Male (a) Female Address Padolo (city) Padel Next of Kin Telephone + 39 * Indicates required fields Mother's Name Mother's Name Mother's Name Mother's Name Mother's Name Parents are together Yes No Unknown Has Insurance Yes No Unknown		Unknown	
Address Padolo City Padel Next of Kin Oracle of Kin Telephone +39 * Indicates required fields		◯ Dead	
City Padel Parents are together Next of Kin Telephone +39 * Indicates required fields		Mother's Name	
Telephone + 39 * Indicates required fields	City Padel		
* Indicates required fields			
	* Indicates required fields		

By clicking again on the **<u>New Photo</u>** button, a picture is taken ready to be attached to the patient information.

8.4.3.1 Camera Settings (👁)

If nothing happens when pressing the <u>New Photo</u> button, press the **switch camera** button \clubsuit that allows switching among the webcams connected to the computer if there is more than one; if only one camera is connected to the computer, it is useful to reset the camera settings and restart it.

Once the camera is activated and the "eye-view" of the camera is visible, press on "+" or "-" to increase or reduce the image quality.

Open Hospital attempts to automatically set the best quality for any webcam connected to the computer and remembers the last settings used.



If the camera does not function, then change the flag to DEBUG in the configuration file to generate additional diagnostic information. Ask the Administrator or refer to the *Administrator's Guide*.

8.4.6 anamnesis

The medical history, case history, or anamnesis of a patient is information gained by a physician by asking specific questions either of the patient, or of other people who know the person and can give suitable information. The aim is to obtain information useful in formulating a diagnosis and providing medical care to the patient.

To modify the anamnesis data of a patient, select the patient in the **Patient Browser** window and

then press the <u>Edit</u> button. When the *Edit Patient* window is shown, click on the *Anamnesis* button and the record is available for changes. All the data can be changed.

он Anamnesis			×
Patient Code: 539 First Name: Philome	na Second Name: Redondo		
Family History	Past Problems (Closed)	Recent Problems (Open)	Surgeries
Nothing to declare	Nothing to declare	Nothing to declare	
Hypertension	Hypertension	Hypertension	
Drug Addiction	Drug Addiction	Drug Addiction	Allergies
Diseases	Diseases	Diseases	Allergies
Cardiovascolaris	Cardiovascolaris	Cardiovascolaris	
Infective	Infective	Infective	Therapies
Endocrine / Metabolic	Endocrine / Metabolic	Endocrine / Metabolic	
Respiratory	Respiratory	Respiratory	
Neoplastic	Neoplastic	Neoplastic	
Ortoreumatologic	Ortoreumatologic	Ortoreumatologic	Usual Medications
Gyno/Obstetrical	Gyno/Obstetrical	Gyno/Obstetrical	
Other	Other	Other	
Remarks (Family)	Remarks (Closed)	Remarks (Open)	Remarks (Extra)
		_][[]	
Diet 🗹 Normal 🗌 Other	Physic	logical History	
Alvo V Normal Other		Period V Normal Other	
Diuresis V Normal Other		Menopause V No Yes Years 0	
Alcool Ves		HRT Vo Yes	Defining 0
Smoke V No Yes		Pregnancies 🗹 No 🗌 Yes Number 🛛	Delivered 0 Aborted 0
Drugs 🗹 No 🗌 Yes			
	<u>S</u> ave	Cancel	

8.5 Admission Functions (Admission)

The admission functions include the managing of patient admission, including surgery, delivery, and discharge.

To access the Admission function, first highlight the patient in the *Patient Browser* window. Next, press the <u>Admission</u> button.

If the patient is not admitted, then the *New Admission* window is shown.

If the patient is already admitted, then the *Edit Admission Record* is shown.

8.5.1 Start the Admission of a Patient (Admission)

Once a patient is registered, they can be admitted to a hospital ward.

First, to insert the admission of a patient, highlight the patient in the **Patient Browser** window. Once this is done, press the <u>Admission</u> button. The **New Admission** window is shown (if the patient is already admitted the **Edit Admission Record** window is shown):

	New Admission	- ×
Code: 1 Name: John Smith Age: Iay Om Od Sex: M	Admission / Discharge Operation Note Ward From Health Unit	Progressive in Year *
ToB:	Admission Date * Admission Type *	Malnutrition
Address City Parents	Diagnosis -IN- *	v
Next of Kin	Discharge Date Bed Days	Discharge Type
+ 39 Blood Type Insurance Marital Status Profession	Diagnosis -OUT-	•
Patient Notes	n. 2	•
	n. 3	▼
	Save Egamination Anamnesis Close	* Indicates required fields

To start an admission, enter the appropriate date into the following fields (on the right side of the window):

- Ward: the ward where the patient is admitted
- **From Health Unit**: (not mandatory) in case of referral, optionally enter the name of the facility where the patient came from
- **Progressive in Year**: is the progressive number per year and per ward automatically set by the system; the value can be changed as needed
- Admission Date: the date of the admission, automatically set to today
- Admission Type: the type of admission (i.e. Ambulance, Self, Referral, etc.)
- **Malnutrition**: (not mandatory) in case of malnutrition, optionally check this box so management of the malnutrition control can be done in the **Patient Data** window (see the Malnutrition control function).
- Diagnosis IN: the diagnosis the patient was admitted with



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It is possible to filter to find diseases more easily. To do this, enter a text fragment in the search field that is part of the disease name. The closer the search text comes to the name of the disease being searched for, the more precise the search is.

Wards, Admission Types, and Diagnosis can be defined by the Administrator. Ask the Administrator or check the <u>Settings</u> chapter.

B

The "Progressive in Year" field is automatically populated by the program; in the case of maternity, the counter starts from the first of January or from the first of June based on the current norm for the health facility. To change the behavior please ask the Administrator to set the <u>MATERNITYRESTARTINJUNE</u> flag in the configuration file or refer to the *Administrator's Guide*.

When data entry has been completed, observe that the **Buttons panel** has the following choices:

- **Save**: confirm and persist the current values.
- Examination: open the *Examination* window (see Patient examination).
- <u>Close</u>: close the window and return to the *Patient Browser* window without applying any changes.

Once the <u>Save</u> button is pressed, the *New Admission* window closes and the patient's status is changed in the *Patient Browser* window as shown in the following figure:

,		Patient B	owser			- 0
	CODE	NAME	AGE	SEX	CITY / ADDRESS / TELEPHONE / NOTE	WARD
Admission Status	531	Mario Rossi	28y 10m 4d	F	Via Verdi - Roma	
All 👻	529	Sara Hucklington	0y 9m 6d	F	Kulele - Long Road 1 - +39	
	528	Kenty Willis	14y 6m 20d	F	Jikney - Furja Street 81 - + 3914413	CHILDREN WA.
Ward	527	Marcus Kellop	52y 9m 27d	М	Mirly - Fullister Pl. 45/b - +396153134	
CHILDREN WARD	526	Genina Justterin	36y 5m 30d	F	Uribe - Ghoulam Rd 231 - +393452432	
FEMALE WARD	525	Mary Garrington	0y 7m 17d	F	Kendring - Ganston - +39	
	524	Geremia Dickinson	67y 8m 20d	M	Kellog - Springfiled - +39	
MALE WARD	523	Quinlan Coors	6y 10m 19d	М	Derbyshire - Franlkin St 12 - +416824999	
MATERNITY WARD	522	Harry Colterson	62y 7m 7d	М	Ottey - Westeman St. 12 - +912314411	MALE WARD
Count: 478	521	Betta Jamison	10y 10m 1	F	Kensington - Kinney Rd. 43 - +39	
	520	Rochester Lenny	0y 10m 20d	M	Warengton - Letterman St. 512 - +005199944	
Age	519	Jeanna Rickember	3y 10m 22d	F	Justin - Lavon Road 62 - +2243143213	
From: To:	518	Jeremy Lindon	58y 3m 1d	М	Misurel - Stenton Plaza 151 - +394252422	
	517	Maria Njoko	20y 6m 2d	F	West Kurtika - Mongi Road 56 - +2434\334	
Sex	516	Genna Susterlind	46y 3m 4d	F	Rudkenny - Genev Road 77 - +3813144111	
	515	Alvaro Robertson	12y 1m 30d	М	Guarinton - Courtney ST. 27 - +39	
All 👻	514	Mario Rossi	28y 10m 3d	М	Roma - Via Verdi - +397653431	
a see hat see	513	Makenzie Everton	27y 9m 29d	М	Albrington - Wayland 21 - +3924534314	
Search Key	512	Millman Enriquetta	80y 10m 9d	F	Crossing - Hartney St. 55	
	511	Henderson Alba	53y 10m 9d	F	Street - South Ilford	
	510	Racuba Scottie	42y 10m 9d	F	Valley south - Montgomery road 11 - +12-43541\54	
New Edit Delete	Admission	Examination OPD	Bill	Data	Clinical Sheet Therapy Merge	Close

8.5.2 Patient Examination

During a patient examination patient, general parameters such as weight, height, arterial pressure, heart rate, temperature, saturation, respiratory rate, and auscultation can be recorded. Open Hospital calculates the patient BMI automatically.

There are two ways to access the module. In the *Patient Browser* window, highlight the patient and click **Examination**. Or in the *New Admission* or *Edit Admission Record* window, click the **E xamination** button. The following window is shown:

~	Date 30/05/2022 12:34 Complain SMI: (W) Weight kg 69.9 Arterial Pressure min 0 / 120 max mmHg Saturation % 98.0 98.0 98.0 HGT mg/dl 80 90.0 90.0 Diuresis Oliguria Max ml 200 Date (H) Max Max Max Max Date (H) Max Max Max Max Bowel Diaresis Oliguria Max Date Max DATE (H) AP HR T 02 HG Diarrheal Crackles			
		Date	30/05/2022 🛅 12:34 📫	
	(H)	Height	cm 171	
23.9	(w)	Weight	kg 69.9	
Normal weight		Arterial Pressure	min 80 / 120 max mmHg	
		Heart Rate	bpm 60	
		Temperature	c 36.0	
		Saturation	% 98.0	
		HGT	mg/dl 80	
		Respiratory Rate	bpm 20	
		Diuresis Vol 24H	mi 100	
		Diuresis	Oliguria 👻	
		Bowel	Diarrheal 👻	
		Auscultation	Crackles 🗸	
		1		NOTE
22/11/2020 02:33	1/1	09.9 807120	00 30.0 90.0 80 - 100 Oliguna Dianneal Clackies	
	BMI: (W) Weight (W) Weight Arterial Pressure min 80 / 120 max mmHg Heart Rate Temperature C 36.0 Saturation HGT Respiratory Rate Diuresis Vol 24H Diuresis Vol 24H Bowel Diarrheal Auscultation Crackles			

The window is divided into two areas: The panel on the left is where new information is entered and the area where the examination history is displayed is on the right.

Enter the following information:

- Date: the date of the examination; by default, it is set to the current date and time
- Height: the patient's height (in cm)
- Weight: the patient's weight (in Kg)
- Arterial Pressure: the patient's arterial pressure (in mmHg)
- Heart rate: the patient's heart rate (in bpm)
- Temperature: the patient's temperature (in °C)
- Saturation: the patient's saturation (%)
- HGT: the result of the Hemo Glucose test (in mg/dl)
- Respiratory Rate: the patient's respiratory rate (in bpm)
- Diuresis Vol 24H: the patient's daily urine volume (in ml)
- Diuresis: the Diuresis description
- Bowel: the description of bowel function
- Auscultation: the patient's auscultation. This will default to unknown if not specified. Options are: Unknown, Normal, Bronchial, Crackles, Rhonchi, Stridor, and Wheezes
- Complain: any additional notes concerning the examination

After entering the data, Open Hospital automatically calculates the BMI and displays the result on the human figure at the left.

When all the data has been entered, click **<u>Save</u>** to save the examination.

To remove an examination, select one or more records in the lower table and click **Delete** to delete them.

8.5.3 Insert or Modify Surgery Data

To insert/modify operations data of a patient admission, first highlight the patient in the **Patient Browser** window and then press the **Admission** button. The **Edit Admission Record** window is shown.

Operation related data can be inserted or modified directly by selecting the **Operation** tab at the top of the window during the admission or modification process of the admission.

Operations data that can be managed are:

- **Operation**: the operation type
- **Date**: the operation date (must be at least older than, or equal to the admission date and at most, more recent than, or equal to the discharge date)
- **Result**: the result of the operation
- Trans Unit: (not mandatory) the number of transfusion units of blood used
- Remarks: (not mandatory) comments about the operation

~			Edit Adn	ission Record		- 😣
	Code: 129	Admission	/ Discharge Operation	Delivery Note		
	Name: Knupp Eric Age: 70y 0m 15d Sex: F	Operation		Q	▼ Dat	
	Sex: F	Result	Success		Tra	ns Unit
	тов:	Remarks				
Tax Number ID						<u>A</u> dd Clear Delete
Address	City		DATE	OPERATION DESIGNATION	RESULT	TRANS UNIT
Main Road 6	Nyacara					
Parents						
Next of Kin	Telephone + 05478146					
Blood Type	Insurance					
Marital Status	Profession					
Patient Notes						
			<u>S</u> ave E <u>x</u>	amination <u>C</u> lose		

It is possible to record several operations at once. The buttons <u>New</u>, <u>Save</u> and <u>Delete</u> at the top right of the table allow the manipulation of the items of the table.

To add a new operation, click on the button <u>New</u> and enter the data as mentioned above, and then click on <u>Save</u>.



Clicking on the button Save just adds the operation to the table; it is not yet

permanently recorded.

To delete a line from the table, select the line to delete by clicking on it (it automatically highlights), then click on the button **<u>D</u>elete**. When finished, click on the button **<u>S</u>ave** below the table to save the changes.



Operation Type and Operations can be defined by the Administrator. Ask the Administrator or check the <u>Settings</u> chapter.

8.5.4 Insert or Modify Delivery Data

If a female patient is admitted, the Maternity ward will be present in the ward list and, by selecting it, the *Edit Admission Record* window will change as shown below:

In the Delivery tab, information about the Maternity case can be specified including:

- Visit Date: the date of a visit before the delivery, if any
- Weight: the weight of the mother before the delivery, if measured
- Treatment Type: the treatment type given to the mother, if any
- Delivery Date: the date of the delivery
- Delivery Type: the type of the delivery
- Delivery Result Type: the result of the delivery
- Control Dates: the dates of control after the delivery
- Abort Date: the date of the abort if the result of the delivery was an abortion

✓	Edit Admission Record	- 😣
Code: 365	Admission / Discharge Operation Delivery Note	
Name: Reardon Mora Age: 25y 1m 13d Sex: F	Visit Date Weight 100.0	Treatment Type
тов:	Delivery Date Delivery Type	Delivery Result Type
Tax Number ID	08/11/2020 15 4:40 + DELIVERY ASSISTED BY CESARIAN SECTION	_
Address		Control n.1 Date
East Rugh 66 Lansing		Control n.2 Date
Parents		Abort Date
Next of Kin Telephone		± -
Blood Type Insurance		
Marital Status Profession		
Patient Notes		
	Save Examination Close	



Treatment Type, Delivery Type, and Delivery Result Type can be defined by the Administrator. Ask the Administrator or check the <u>Settings</u> chapter.

8.5.5 Discharge of a Patient (<u>A</u>dmission)

To discharge a patient from the hospital, highlight the patient in the *Patient Browser* window and then press the <u>Admission</u> button. The *Edit Admission Record* window is shown.

To complete the discharge of the patient, enter the following data:

- Discharge Date: the date of the discharge
- **Bed Days**: the number of days admitted. Computed by the system as the difference between admission date and discharge date
- Discharge Type: the type of the discharge
- Diagnosis OUT: the diagnosis the patient was discharged with

As in the case of *Diagnosis IN*, it is possible to filter to find diseases more easily.

~		Edit Admission Rec	ord	- 8
Code: 34	8	Admission / Discharge Operation [Delivery Note	
Age: 41y Sex: F	eche Carlosy 10m 18d	Ward MATERNITY WARD	From Health Unit	Progressive in Year *
ToB:		Admission Date *	Admission Type * SELF	Malnutrition
Address	City Fredericksburg	Diagnosis -IN- *		
Parents	redencesburg	Acute Fla	accid Paralysis	•
		Discharge Date 04/12/2020 13 16:58 +	Bed Days 32	Discharge Type
Next of Kin	Telephone	Diagnosis -OUT-		
Blood Type	Insurance	n. 1		_
Marital Status	Profession			
Patient Notes		n. 2		~
		n. 3		v
				* Indicates required fields
		<u>S</u> ave E <u>x</u> amination	n <u>C</u> lose	



Discharge Types and Diseases can be defined by the Administrator. Ask the Administrator or check the <u>Settings</u> chapter.

When data entry has been completed, observe that the **Buttons panel** has the following choices:

- **<u>Save</u>**: confirm the values on the window.
- Examination: to open the *Examination* window (See Patient examination).
- <u>Close</u>: close the window and return to the *Patient Browser* window without applying any changes.

Once the <u>Save</u> button is pressed, the *Edit Admission Record* window closes and the patient's status is changed in the *Patient Browser* window as shown in the following figure:

~		Patient B					6
Admission Status	CODE	NAME	AGE	SEX	CITY / ADDRESS / TELEPHONE / NOTE	WARD	
	354	Beckmann Kurt	38y 10m 9d	F	Orchard - Rollen Dr. 134 - +0754524245	MATERNITY W.	
All 🔽	353	Ciancio Michale	28y 10m 9d	F	Ilvers - Harvey Pl. 4 - +141434		
	352	Dean Jarvis	39y 10m 9d	F	Oak - Royal	MATERNITY W.	
Ward	351	Connie Westbrook	28y 10m 9d	F	Mount - Ave.	MATERNITY W.	
CHILDREN WARD	350	Martin Deforge	18y 10m 9d	F	Falls - Niagara	MATERNITY W.	
FEMALE WARD	349	Mcguirk Bennett	40y 10m 9d	F	NJ - Elizabeth - +5242421412	MATERNITY W.	
	348	Carlo Meche	40y 10m 9d	F	Fredericksburg - Lane	MATERNITY W.	
MALE WARD	347	Jere Hutcheson	40y 10m 9d	F	NY - Fairport	MATERNITY W.	
MATERNITY WARD	346	Kirton Winford	37y 10m 9d	F	Parkville - Dr. 56	MATERNITY W.	
Count: 478	345	Lamore Dylan	19y 10m 9d	F	Wyring - Salem County West - +31431341	MATERNITY W.	
	344	Manual Rowse	43y 10m 9d	м	WI - Menasha		
Age	343	Jenks Modesto	0y 10m 9d	F	PA - Waynesboro	CHILDREN WA.	
From: To:	342	Ellard Hyman	1y 10m 9d	м	VA - Leesburg	CHILDREN WA.	
	341	Bryden Keneth	0y 10m 9d	м	Desplains - North Drive 23	CHILDREN WA.	
Sex	340	Everart Lindon	20y 10m 9d	M	Lurewon - Opal new		_
	339	Jack Lupe	42y 10m 9d	M	River town - Fall road		_
All 👻	338	Raul Koski	33y 10m 9d	M	ND - Bismarck		_
	337	John Emberton	39y 10m 9d	M	Beach - Ormond		_
Search Key	336	Moreles Emery	36y 10m 9d	M	Des Moines - Drive st 66		_
	335	Provenzano Branden	75y 10m 9d	M	Wartingon - Leland st. 56		
	334	Starns Kristopher	14y 10m 9d	М	Mass Cambrisge - Lowell st 5		
<u>N</u> ew <u>E</u> dit <u>D</u> elete	Admissio	n E <u>x</u> amination <u>O</u> PD	Bill	Da <u>t</u> a	Clinical <u>Sheet</u> T <u>h</u> erapy <u>M</u> erge	Close	

8.6 OPD (<u>O</u>PD)

If the *OPDEXTENDED* flag is set as YES in the configuration file (ask the Administrator), the button **<u>OPD</u>** in the *Patient Browser* window allows for starting an OPD by selecting the related patient first (see Create a new patient visit for more information).

8.7 Bill (<u>B</u>ill)

The button **<u>Bill</u>** in the *Patient Browser* window is used to start a bill for a selected patient (see Insert a new bill for more information).

8.8 Manage Patient Historical Data (Data)

This function allows modifying data about a patient and modifying or deleting the history of admissions and discharges of a patient. Malnutrition can also be managed with this function.

To access the patient historical data function, first highlight the patient in the **Patient Browser** window. Next, press the **Data** button. The **Patient Data** window is shown:

~			Patie	ent Data							- 🛛
		DATE 02/11/2020 25/09/2020			DIAGN(Malaria Gastro-int		Malaria		STATUS New Admi 11/10/2020		
Address	City	1		Exams	Operat	ions	Drugs				
Fall road N. 782	-	ertown		DAT		IUIIS	EXAM		CODE	RES	ШΤ
Parents Next of Kin	Tel	ephone									
Blood Type	Inst	urance									
Marital Status	Pro	fession									
<u>c</u>	PD Chart Ac	dmission Chart	Di <u>s</u> char	ge Chart	Lau	nch <u>R</u> e	port	<u>D</u> ICOM	<u>c</u>	lose	

The screen is divided into three areas:

- Patient summary (on the left)
- Data table (on the right)
- Buttons panel

The **Patient summary** area shows a summary of the patient's data.

The **Data table** shows a summary of all the outpatients (OPD) visits and all the admissions related to the patient.

The following functions are accessible from the **Buttons panel** of the window **Patient Data**:

- Edit: modify the data of an admission or an outpatient visit.
- **Delete**: delete an existing admission.
- <u>Malnutrition Control</u>: create, modify or delete malnutrition control data of a patient.
- **<u>C</u>lose**: exit from the function **Patient Data** and return to the **Patient Browser** window.

8.8.1 Modify Data of an Admission (Edit)

To modify the data of an admission, select the admission in the **Data table** of the **Patient Data** window and then press the **Edit** button. When the **Edit Admission Record** window is shown, the record is available for changes. All data can be changed.

~	New Admission – 🛞
Code: 339	Admission / Discharge Operation Note
Name: Jack Lupe Age: 44y 3m 28d Sex: M TOB:	Ward From Health Unit Progressive in Year *
Tax Number ID	Admission Date * Admission Type * Malnutrition
Address	Diagnosis -IN- *
Fall road N. 782 River town	Gastro-intestinal DISEASEss (non infective)
Parents	
	Discharge Date Bed Days Discharge Type
Next of Kin	Diagnosis -OUT-
Blood Type Insurance	n. 1 Gastro-intestinal DISEASEss (non infective)
Marital Status Profession	
Patient Notes	n. 2 🔍 🔍 💌
	n. 3
	* Indicates required fields
	Save Examination Close

When the changes have been completed, observe that the **Buttons panel** has the following choices:

- **<u>Save</u>**: confirm new values (all the previous values are lost).
- Examination: open the *Examination* window (See Patient examination).
- **<u>C</u>lose**: close the window and return to the **Patient Data** window without applying any changes.

8.8.2 Modify Data of an Outpatient Visit (Edit)

To modify the data of an outpatient visit, select the OPD in the **Data table** of the **Patient Data** window and then press the **Edit** button. When the **Edit OPD Registration** window is shown, the record is available for changes. All data can be changed.

он				Edit OPD Registration	1			_ _ ×
		0	Re-Attendance	New Attendance	🗌 Referral	Referred To		
Attendance Dat	e 02/11/2020	8:55	+	OPD No. 134		Ward OPD	-	Notes & Symptoms
Search			🔍 🔍 Jack Lu	ipe			- 10	
Disease Type	2. OTHER INFEC	TIOUS/COMMU	NICABLE DISEAS	iES			-	
Diagnosis			🔍 Malari	a			-	
Diagnosis n.2 (f	ull list)						-	
Diagnosis n.3 (fr	ull list)						-	
Next visit da	te	15	• Ward	-				
Patient Oper	ation							
Patient (cod	e: 339)							
First Name	Jack							
Last Name	Lupe							
Address	Fall road N. 782							
City	Rivertown							
Next of Kin								
Age	44y 10m 6d							
Sex	۲	Male O Fema	le					
DOX	0						-	
								-
			<u>c</u>	K <u>E</u> xamination	<u>C</u> ancel			

When the changes have been completed, observe that the **Buttons panel** has the following choices:

- **Save**: confirm new values (all the previous values are lost).
- Examination: open the *Examination* window (See Patient examination).
- **Cancel**: close the window and return to the **Patient Data** window without applying any changes.

8.8.3 Delete an Admission (Delete)

To delete a stored admission, select the admission in the *Patient Data* window. Next, press the **Delete** button. A confirmation window is shown; now the admission can be deleted. Deleted admissions are no longer available.

~	Question 🛛 🔇	
?	Delete the selected admission?	
	Yes No	

The **Buttons panel** has the following choices:

- <u>Y</u>es: confirm the deletion.
- No: close the window and return to the previous window.

8.8.4 Delete an Outpatient Visit (Delete)

To delete a stored outpatient visit (OPD), highlight it in the *Patient Data* window. Next, press the **Delete** button. A confirmation window is shown; now the OPD can be deleted. Deleted outpatient visits are no longer available.

~	Question 😣
?	Delete the selected OPD?
	Yes No

The **Buttons panel** has the following choices:

- <u>Y</u>es: confirm the deletion.
- <u>No</u>: close the window and return to the previous window.

8.8.5 Manage Malnutrition Control of a Patient (Malnutrition Control)

The malnutrition control function is available only for the admissions who have concerns about malnutrition (malnutrition field activated in *New Admission* window, see the next page).

The Malnutrition control function allows the registration of specified visits for those patients who need to control their weight/height index.

To access the Malnutrition control function, highlight the appropriate admission in the *Patient Data* window. Next, press the <u>Malnutrition Control</u> button. The *Malnutrition Browser* window is shown:

~	Malnutrition	Browser	8
FURTHER DATE	APPROVAL DATE	HEIGHT	WEIGHT
20/01/2013	20/02/2013	170.0	60.0
20/02/2013	20/03/2013	170.0	60.0
20/03/2013	20/04/2013	170.0	61.0
<u>N</u> ev	v <u>E</u> dit <u>D</u>	elete <u>C</u> los	e

This function supports the insertion (**New**) of a new malnutrition control, the modification (**Edit**) or deletion (**Delete**) of an existing malnutrition control.

8.8.5.1 Insert a New Control (<u>N</u>ew)

By pressing the <u>New</u> button in the *Malnutrition Browser* window, the *New Malnutrition* window, shown below, is available:

New Malnutrition				
Date of th	is control:	20/01/2013	15	
Date of th	e next control:	20/02/2013	15	
Weight:		60		
Height:		170.0		
<u>O</u> K <u>C</u> ancel				

To record a new control, enter the following fields:

- Date of this control: the system automatically sets the date to today
- Date of next control: the date of the next planned control
- Weight: the weight of the patient; use any kind of measure with decimal notation
- Height: the height of the patient; use any kind of measure with decimal notation

8.9 Clinical Sheet (Clinical <u>Sheet</u>)

The Clinical Sheet functionality is very similar to the **Data** functionality (see **Patient Browser** window).

To access the Clinical sheet function, highlight the patient in the *Patient Browser* window. Next, press the **Clinical <u>S</u>heet** button. The *Patient Data* window is shown:

он		Patient Data					_ ×
	Code: 258	DATE	WARD	DIAGNOSIS IN	DIAG	NOSIS OUT	STATUS
	Name: Carmelina Rauch	03/11/2020	OPD	Gastro-intestinal	. Gastro	intestinal	New Admi
	Name: Carmenna Rauch Age: 7y 11m 6d	02/11/2020	CHILDREN W	Malaria	NO DISE	EASE	present
Sex: M TOB:							
Tax Number ID							
Address	City	Exams	Operations	Drugs			
Locust Rd.	Waymo	DATE		EXAM	CODE	RESI	JLT
		20/11/2020	1.2 WB	C Count	299 4	000 - 7000 (NORMAL)
Parents		20/11/2020	5.5 ZN		300 N	EGATIVE	
Farents		20/11/2020	5.6 WA			EGATIVE	
		03/11/2020	URINAL			ultiple result	ts
		03/11/2020				++	
		02/11/2020		od Slide (Malaria)		+++	
		02/11/2020	3.3 ST(OOL MICROSCOPY	99 M	ultiple result	ts
Next of Kin	Telephone						
	+54213434						
Blood Type	Insurance						
Marital Status	Profession						
Patient Notes							
<u>O</u> PD	Chart <u>A</u> dmission Chart Di	<u>s</u> charge Chart	Launch <u>R</u> ep	port <u>I</u> maging	g <u>C</u>	lose	

The window does not allow changing the data, but for the selected patient, it shows all the outpatient (OPD) visits, the Admissions, his/her Laboratory exams and the various surgeries they underwent; by clicking on a row in the **Data table** at the top of the window, the related laboratory exams will be shown as follows:

- the selected row is an Admission: all the exams done between the admission date and the discharge date are shown in the **Data table**, in the *Exams* tab;
- the selected row is an outpatient (OPD) visit: all the exams done after the selected OPD visit until the next one (if any) or next admission date (if any) are shown in the **Data table**, in the *Exams* tab.

The tab *Operations* shows the various operations recorded for the selected patient between the admission date and the discharge date.

The tab **Drugs** shows the drugs recorded for the selected patient.

The **Buttons panel** has the following choices:

- **<u>O</u>PD Chart**: print the OPD chart if the selected row in the grid on top is an OPD visit.
- <u>Admission Chart</u>: print the Admission chart if the selected row in the grid on top is an Admission.
- **Discharge Chart**: print the Discharge chart if the selected row in the grid on top is an Admission and the patient is already discharged.
- Launch <u>Report</u>: print the clinical sheet of a patient.
- **Imaging**: launch the imaging viewer.
- <u>Close</u>: close the window and return to the *Patient Browser* window without applying any changes.



The DICOM flag in the configuration file must be changed to activate the imaging functionality. Ask the Administrator or refer to the *Administrator's Guide*.

By pressing the Launch <u>Report</u> button in the *Patient Data* window, a new window is shown:

~	Report	-	⊗
Date From:		09/11/2021	15
Date To:		09/06/2022	15
Report for:			
🗌 Admissio	on		
OPD			
Laborate	ory		
🗌 Operatio	n		
🗌 Drugs			
🗹 Examina	tion		
Launch <u>R</u> ep	ort	<u>C</u> lose	

The application is set to get the entire history of the patient, but this can be changed by querying different date ranges and a specific set of information.



it is possible to double-click an item on any table to automatically restrict the Clinical Sheet report to the selected date ranges and item's category.

8.9.1 Imaging (<u>I</u>maging)

The DICOM flag in the configuration file must be changed to activate the imaging functionality. Ask the Administrator or refer to the *Administrator's Guide*.

In the *Patient Data* window, click the <u>I</u>maging button to access the *Imaging Viewer* window as shown below.

он	Imaging Viewer	>	<
	Zoom Frames		
	Load image		

This module allows attaching image files to the patient's folder. To do this, click the **Load Image** button. The following window is shown:

		Open Image	×
Look <u>I</u> n: 📑 in	nages		
File <u>N</u> ame:			
Files of <u>T</u> ype:	All Files		-
		Open Imag	je Cancel

In the case of multi-frame image, the whole folder can be selected:

	Open Image	×
Look <u>I</u> n:	: C WRIST RIGHT	
📑 scou	UT 3-PLANE RT 2	
📑 scou	UT AXIAL LG FOV RT 1	
📑 STIR (COR. RT 5	
T1 TS	SE COR RT 4	
T2 TS	SE AX FS RT 3	
File <u>N</u> am	ne:	
Files of <u>T</u>	<u>Type:</u> All Files	-
	Open Image Cano	cel

Next, the following data to be used for the image is prompted for (or the multi-frame image series):

- Date: the system will propose the current date or other dates provided by the image file itself
- Category: optionally select an image category (see Imaging Types):
- **Description**: the description to be used.

~	Load Image	8
Date:	05/03/2004	15
Category:	XRAY	-
Description:	SCOUT 3-PLANE RT-2	
	<u>O</u> K <u>C</u> ancel	

<u>N.B.</u> There is no **Edit Image**, so if a mistake is made, delete the image file (**Delete Image**) and then reload it (**Load Image**) again.

Find the image file and click the **Open Image** button to load the file into the **Imaging viewer**.

он	Imaging Viewer	_ = ×
18/11/2022 23:59 ND		
	Zoom Frames	

To view the file in the main window, double-click on it.



The **Zoom** slider can be used to Zoom in or out of the image.

More than one image file can be loaded into a patient folder. It is possible to delete an image file from the patient's folder. First, select the file in the left view and then click the **Delete Image** button.

The thumbnails on the left can be hidden by changing the *DICOMTHUMBNAILS* flag in the configuration file. Ask the Administrator or refer to the *Administrator's Guide*.

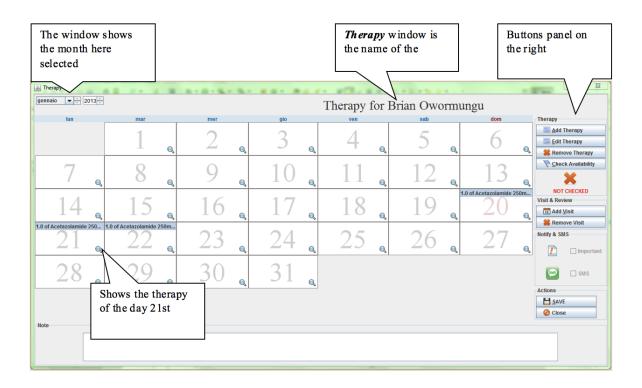
8.10 Therapy Management (T<u>h</u>erapy)

To manage the therapy of a patient, select the patient in the **Patient Browser** window. Next, press the **Therapy** button. The specific window for therapy management of the selected patient is shown. The window has no name, but it is typically referred to as the **Therapy** window. The name of the selected patient is shown at the top.

In the *Therapy* window, it is possible to insert, modify or remove a therapy for the selected patient.

In addition, from the *Therapy* window, it is possible to insert or remove (not modify) scheduled visits for the selected patient.

The window is complex, see the comments below to understand the structure.



8.10.1 Add a Therapy (<u>A</u>dd Therapy)

To add a new therapy for the patient, press the <u>Add Therapy</u> button on the right of the window. The *New Therapy Entry Form* window is shown.

A therapy defines for every pharmaceutical: the quantity, frequency, and period of use.

More than one therapy for the same patient can be added. The set of therapies defined for a patient is called a "Therapy plan".

~	New Therapy Entry Form			\otimes	
•	Pharmaceutical Cloxacillin 500mg Vial Cyclophosphamide 200mg Vial Cyclophosphamide 500mg Vial Diazepam 5mg / ml 2ml Amp Diclofenac 25mg/ml 3ml Amp Digoxin 0.25 mg/ml 2ml Amp Gentamicin 40mg/ml 2ml Quantity 4 \div Frequency within day © One \bigcirc Two \bigcirc Three Frequency within period Every 2 \div d		15	Period Days Weeks Months 4 1 1 0 1 Starts - Ends Start End 09/06/2022 1 19/06/2022 Note Small up/down arrows for small quantity defintion	



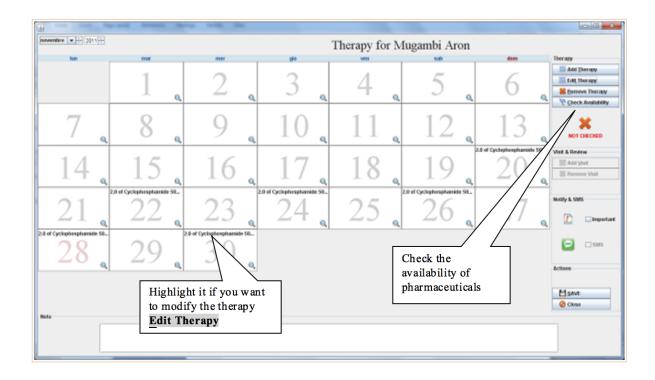
To better explain how the function **Add a therapy** works, the **Therapy** window below shows the results of the therapy defined in the *New Therapy Entry Form* shown above.

To add a therapy, the following information is required:

- **Pharmaceutical**: the pharmaceutical of the therapy; in the example above, this is *Cyclophosphamide 500mg* (highlight the desired pharmaceutical)
- **Quantity**: set the quantity; this can be done by clicking on the small up/down arrows (for small quantities) or moving the cursor on the right (for large quantities); in the example above, the selected value is "4"
- **Frequency within day**: set how many times (frequency) the dose has to be given during one day (possible choices are: one, two, three, four); in the example above, "One" means once per day
- **Frequency within period**: set the periodicity of the therapy; in the example above, this is every two days (a quantity of 4 *Cyclophosphamide 500mg* every two days has to be given)
- **Period**: set the length of therapy. To do this, select days, weeks, and months; in the example above, the therapy is 11 days long (4 days and 1 week)
- **Starts Ends**: set start and end dates of the therapy; in the example, the therapy starts on November 20th and finishes on November 30th
- Note: an optional area for free text or notes

When data entry has been completed, observe that the **Buttons panel** has the following choices:

- **OK**: confirm the data of the therapy. The therapy is not saved until it is confirmed with the **Save** button in the **Therapy** window (see Save function described below).
- **<u>Cancel</u>**: close the window and return to the *Therapy* window.



8.10.2 Modify a Therapy (Edit Therapy)

To modify a therapy, highlight one occurrence of the therapy (see box above) in the **Therapy** window and then press the **<u>E</u>dit Therapy** button. The **Edit Therapy Entry Form** window will appear. Any of the data can be modified as in the **Add a therapy** function.

See Add a therapy function for a detailed description.

8.10.3 Remove a Therapy (Remove Therapy)

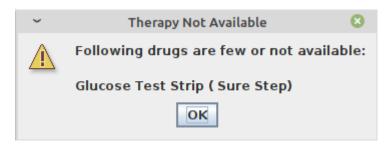
To remove a therapy, highlight one occurrence of the therapy (see box above) in the **Therapy** window and then press the **<u>Remove Therapy</u>** button and the therapy is removed from the window and the <u>**Save**</u> button will be enabled (if not already enabled). The removal of a therapy is not effective until it is confirmed with the <u>**Save**</u> button (see <u>Save function</u>).

8.10.4 Check Availability of the Pharmaceuticals (Check Availability)

When the therapy plan is entered (all the therapies of a patient), press the *Check Availability* button in the **Buttons panel** on the right side of the *Therapy* window to check the availability of the related pharmaceuticals in the hospital. If the pharmaceutical checked is present in the quantity requested by the therapy plan, a green-colored checkmark is shown.



If insufficient quantities are available, the application shows the small window (shown below), called *Therapy Not Available:*



This window provides information that the therapy is not available, but it does not block the input of the Therapy plan. Click the **OK** button to dismiss the window.

After the check, in the **Buttons panel** of the *Therapy* window if there is a red X and the text "NOT AVAILABLE" this means that at least one of the involved drugs is not available.



The check can also be done therapy by therapy and not only at the end of the input of all the therapies.

The check function is not mandatory, the therapy plan can be saved without checking the presence of the pharmaceuticals in the hospital (see <u>Save function</u> below).

8.10.5 Save Function (<u>S</u>ave)

When the input of the therapy plan is completed, press the <u>Save</u> button in the **Buttons panel** of the *Therapy* window. Be aware that the therapy plan is saved when the *Message* window is shown:

~	Information	8
i	Therapies plan saved	
	ОК	

If the availability check has not been executed yet (see Check availability of the pharmaceuticals), the *Not checked* window is shown:

~	Not checked 🛛 🔇	3
?	The Therapy has not been checked, continue	?
	OK Cancel	

The **Buttons panel** has the following choices:

- **OK**: confirm the therapy plan; if the check for the existence of the pharmaceuticals in the hospital has not been done the application saves the therapy plan and shows the confirmation window shown above.
- **<u>Cancel</u>**: return to the *Therapy* window without saving the therapy plan.

If the availability check is done (see Check availability of the pharmaceuticals), but the drugs requested by the therapy plan are not available in the hospital, the *Not Available* window is shown:



The **Buttons panel** has the following choices:

- <u>O</u>K: confirm the therapy plan; the therapy is saved, but the requested pharmaceuticals are not in the hospital. The application saves the therapy plan and shows the confirmation window, shown below.
- **Cancel**: return to the **Therapy** window without saving the therapy plan.

Whether or not the availability check that the pharmaceuticals are present in the hospital is done, when the application shows the notification window below, the therapies plan is saved.

~	Information	8
i	Therapies plan saved	
	ОК	

Press **OK** to finish.

8.10.6 Close Function (Close)

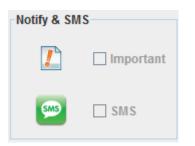
The close function exits from the *Therapy* window. Press the **Close** button to access the Close function. The *Select an Option* window is shown:

The Buttons panel has the following choices:

он	Select an Option					
?	Save?					
	Yes <u>N</u> o Cancel					

- <u>Y</u>es: this function is the same as the **Save function** (<u>Save</u>) described above.
- No: return to the *Therapy* window without saving the therapy plan.
- **Cancel**: exit the function and return to the **Therapy** window without applying any changes.

8.10.7 Notify & SMS



Use these two checkboxes to set the therapies plan for this patient as important (*not implemented yet*) and notifiable via SMS.

Briefly, the SMS notification works in the following way:

- therapies: a notification will be sent to the patient with an SMS at 8:00 am, with text **"REMINDER: " + therapy details**;
- visits: a notification will be sent to the patient with an SMS 24 hours before the scheduled date and time, with the text **"REMINDER VISIT: " + visit details** (see SMS Manager).

8.10.8 Visits

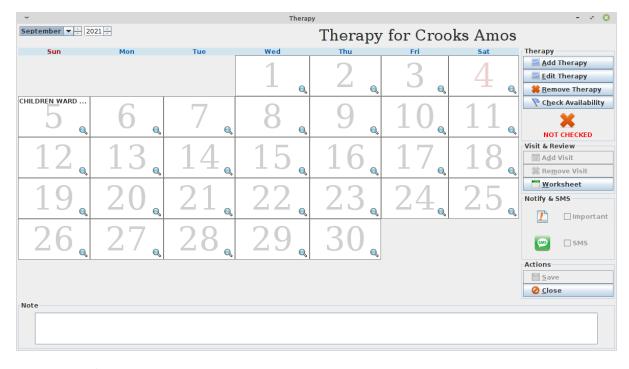
By clicking on the **A<u>d</u>d Visit** button, the following window is shown:

~	Add Visit	⊗ `
Ward	Please Select a Patient	
CHILDREN WARD	Crooks Amos	😂 Change <u>P</u> atient
Service		
Duration (Min)		
Date 27/06/2022 15 8:	50 🔹	
	<u>O</u> K <u>C</u> ancel	

The patient is already selected, while other fields need to be set:

- Ward: to specify the ward where the patient has to be received (it will be shown in the Worksheet, see Worksheet)
- Service: a brief description of the service that will be provided to the patient (optional)
- **Duration (Min)**: the estimated duration of the service that will be provided (optional, default is 30 minutes)
- Date: the date and the time for the appointment

Press **OK** to save the appointment and it will be shown in the calendar, along with the therapies.



 \bigcirc

By pressing the **Worksheet** button, a visit can also be added there, after checking the actual workload for a specific date.

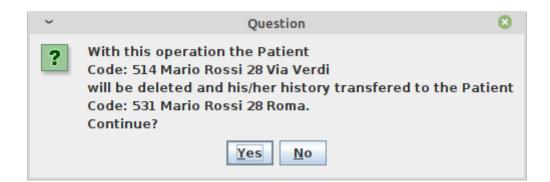
8.11 Merge Function (Merge)

The merge function is used to merge two patients' histories into a single case. This is used to fix the case of two different registrations when a patient is admitted to the Hospital.

~			Patient Browser			- 0
	CODE	NAME	AGE	SEX	CITY / ADDRESS / TELEPHONE / NOTE	WARD
Admission Status	531	Mario Rossi	28y 9m 18d	I M	Via Verdi - Roma	
All 👻	529	Sara Hucklington	0y 8m 20d	F	Kulele - Long Road 1 - + 39	
	528	Kenty Willis	14y 6m 3d	F	Jikney - Furja Street 81 - + 3914413	
Ward	527	Marcus Kellop	52y 9m 10d	I M	Mirly - Fullister Pl. 45/b - +396153134	
CHILDREN WARD	526	Genina Justterin	36y 5m 13d	F	Uribe - Ghoulam Rd 231 - +393452432	
FEMALE WARD	525	Mary Garrington	0y 7m 0d	F	Kendring - Ganston - +39	
	524	Geremia Dickinson	67y 8m 3d	M	Kellog - Springfiled - + 39	
MALE WARD	523	Quinlan Coors	6y 10m 2d	M	Derbyshire - Franlkin St 12 - +416824999	
MATERNITY WARD	522	Harry Colterson	62y 6m 21 0	M	Ottey - Westeman St. 12 - +912314411	MALE WARD
Count: 478	521	Betta Jamison	10y 10m 10	F	Kensington - Kinney Rd. 43 - +39	
	520	Rochester Lenny	0y 10m 3d	M	Warengton - Letterman St. 512 - +005199944	
Age	519	Jeanna Rickember	3y 10m 5d	F	Justin - Lavon Road 62 - +2243143213	
From: To:	518	Jeremy Lindon	58y 2m 15o		Misurel - Stenton Plaza 151 - +394252422	
	517	Maria Njoko	20y 5m 16c	I F	West Kurtika - Mongi Road 56 - +2434\334	
Sex	516	Genna Susterlind	46y 2m 18d	I F	Rudkenny - Genev Road 77 - +3813144111	
All	515	Alvaro Robertson	12y 1m 13d		Guarinton - Courtney ST. 27 - +39	
All	514	Mario Rossi	28y 9m 17d	I M	Roma - Via Verdi - +397653431	
	513	Makenzie Everton	27y 9m 12d		Albrington - Wayland 21 - +3924534314	
	512	Millman Enriquetta	80y 9m 23d		Crossing - Hartney St. 55	
	511	Henderson Alba	53y 9m 23d		Street - South Ilford	
Fearch Key	510	Racuba Scottie	42y 9m 23d		Valley south - Montgomery road 11 - +12-43541\54	
Search Key	509	Ventier Asia	32y 9m 23d		Roadinsy - Flamingo 45	
	508	De Koenig Melissa	50y 9m 23d		Furklo - Merriam plaza	
	507	Westermann Fred	21y 9m 23d	I M	Bilbao - Avenida johanes 84	
New Patient Edit Patient	Delete Patie	nt <u>A</u> dmission	Examination	<u>O</u> PD	Bill Data Clinical Sheet Therapy	Merge <u>C</u> lose

Merging data of two patients requires highlighting both of them in the *Patient Browser* window.

Once the two patients are selected, press the **Merge** button. The **Merge** window is shown:



By pressing *Yes*, the patient with the smaller code is deleted and all their history transferred to the other newer patient record, that is to say:

- Admission History
- Height & Weight History
- Laboratory History
- OPD History
- Bills History
- Pharmaceuticals Stock Ward History
- Therapy History
- Visit History
- Vaccine History

The other (older) patient is then deleted.

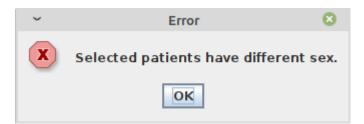
8.11.1 Different Names

If two patients with different names are merged, the final name must be chosen in the window, shown below:



8.11.2 Different Sex

If two patients with a different sex are merged, the operation is not allowed, with the window shown below:



9 Statistics (Statistics)

9.1 Main Characteristics

The purpose of this function is to extract data registered in the application and present it in a useful fashion.

Click with the mouse on the button or press "Alt + T" to enter the **Statistics Report Launcher**

он	_ ×
	User: admin
	OPD
	<u>P</u> harmacy
	<u>L</u> aboratory
	<u>Admission/Patient</u>
	Accounting
	S <u>t</u> atistics
	<u>V</u> accines
RMATICI A TITTAE	<u>W</u> orksheet
IN TRAT	<u>R</u> eports
THE	<u>S</u> ettings
HOSPI	<u>H</u> elp
ō	Logout

Open Hospital provides a set of reports designed for the Ugandan Ministry of Health (HMIS) and for the Kenyan Ministry of Health (MOH) as well as national independent reports (OH). All of these reports may be useful for any organization and can be added or removed as explained in the Administrator Manual's chapter "6 – Reports".

Open Hospital ships with the following set of reports:

- OH001 Registered patients
- OH002 Registered patients by origin
- OH003 Registered patients by Age and Sex
- OH004 All incomes by price codes
- OH005 Count outpatient
- OH006 Count outpatient diagnosis

- OH007 Lab monthly basic
- OH008 Lab summary for OPD
- OH009 InPatient Report
- OH010 OutPatient Report
- OH011A Revenues, Incomes & Receivables (All)
- OH011B Revenues, Incomes & Receivables (Pending)
- OH011C Revenues, Incomes & Receivables (Month)
- OH011D Revenues, Incomes & Receivables (Ward / Month)
- HMIS 108 page 1 1. census info
- HMIS 108 page 1 2. referrals
- HMIS 108 page 1 3. operations
- HMIS 108 In Patient (diagnosis In)
- HMIS 108 In Patient (diagnosis Out)
- HMIS 105 Opd attendance
- HMIS 105 Opd referrals
- HMIS 105 Opd by diagnosis
- HMIS 55b Lab monthly formatted
- HMIS 33b Weekly epidemiological surveillance
- HMIS 33b Weekly epidemiological surveillance over 5 years old
- HMIS 33b Weekly epidemiological surveillance under 5 years old
- MOH 717 Monthly Workload Report for Hospitals (Page1)
- MOH 717 Monthly Workload Report for Hospitals (Page2)
- MOH 705A Under 5 Daily Outpatient Morbidity Summary Sheet
- MOH 705A Over 5 Daily Outpatient Morbidity Summary Sheet
- OH23A1 Open bills list: a report that shows the list of opened bills (pending bills) per period
- OH23B1 Revenues, Incomes & Receivables: gives the list of incomes per period

9.2 Report Launcher (Launch Report)

This function is used to produce all reports listed in the previous paragraph. Pressing the **Statistics** button on the main menu the **Report Launcher** window is shown:

он	Report Launcher	_ ×
Parameters Selection		
Report OH001 - Registered Patients	▼ Date From: 20/04/2022 15 Date To: 20/11/2022	15
	Launch Report Excel Close	

To produce one report:

- Select a report from the list
- Specify the period (it could be *month-year* or *from date-to date* depending on the report)
- Press the Launch <u>Report</u> button for PDF or <u>Excel</u> for CSV (Comma Separated Values) format

After some time passes, the JasperViewer® will show the generated report as follows:

▲ JasperViewer	1%		
Registered Pa		CH Spon Register	
	St. Luke Ca	tholic Hospital and College of Nursing	
		P.O. BOX 250 - Wolisso, Southwest Showa Zone	
		st.lukehospital@ethionet.et	
		+251-11 341 0800 / 0714	
novembre			=
01 giovedì	253		
02 venerdì	174		
03 sabato	66		
04 domenica	66		
05 lunedì	287		
06 martedi	251		
07 mercoledì	241		_
08 giovedì	225		
09 venerdì	163		
10 sabato	65		
11 domenica	66		
12 lunedì	318		
13 martedì	237		
14 mercoledì	223		
15 giovedì	1		
	2636		
TOTAL	2636		-



By default, an internal PDF viewer is used. An external PDF reader can be used by modifying the INTERNALVIEWER flag in the configuration file. Ask the Administrator refer to the *Administrator's Guide*.

The report can be saved as a PDF by clicking on the save button (\square) or printing it by clicking on the print button (\oiint).



A PDF copy of every report is always saved within the folders of Open Hospital. Ask the Administrator or refer to the *Administrator's Guide*.

10 Reports (<u>Reports</u>)

10.1 Main Characteristics

This function is used to generate reports about the hospital like a list of exams, diseases, etc.

Click with the mouse on the button or press "Alt + R" to enter the **Reports** *submenu*

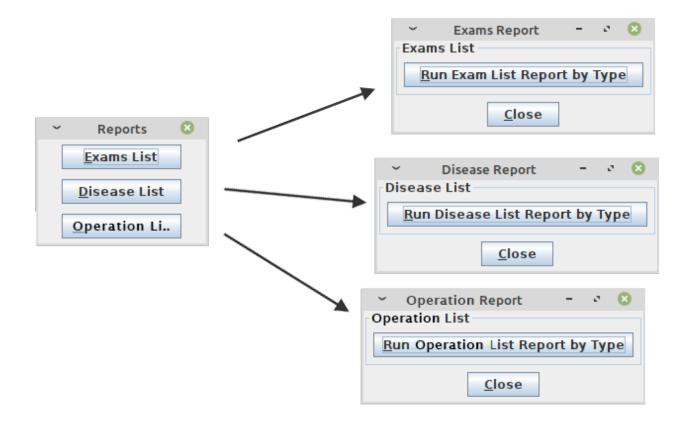
он	_ ×
	User: admin
	OPD
	<u>P</u> harmacy
	<u>L</u> aboratory
	<u>Admission/Patient</u>
	A <u>c</u> counting
	Statistics
	Vaccines
SEMATECE ZA NTET 3E	<u>W</u> orksheet
TROT	<u>R</u> eports
A	<u>S</u> ettings
OH POEN	<u>H</u> elp
0	Logout

Open Hospital currently only has these three reports:

- Exams List
- Diseases List
- Operations List

10.2 Reports

By pressing **<u>Reports</u>** from the main menu, the *Reports* menu is accessed. From this menu, the following types of reports are available: <u>**Exams List**</u>, <u>**Disease List**</u> and <u>**Operation List**</u>.



10.2.1 Exams List (Exams List)

This report is a list of exams, divided by types, as defined by the Administrator.

10.2.2 Disease List (Disease List)

This report is a list of diseases, divided by types, as defined by the Administrator.

10.2.3 Operation List (Operation List)

This report is a list of operations, divided by types, as defined by the Administrator.

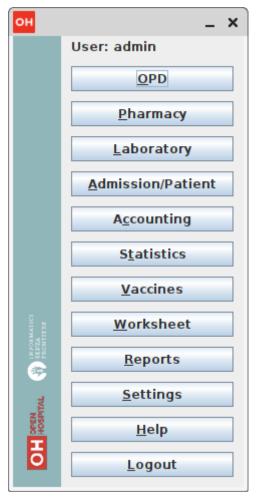
11 Communication (Communication)

11.1 Main Characteristics

The Communication module can be enabled by changing the *XMPPMODULEENABLED* flag in the configuration file. Ask the Administrator or refer to the *Administrator's Guide*.

Through the communication module events and notifications can be shared among users logged into the system,

Click with the mouse on the button or press "Alt + M" to enter the **Communication** *window.*



This function is used to chat and share information with other users logged in the system if in turn the application has been set in <u>multi-user</u> mode and an <u>XMPP Server</u> is active and running (Ask the Administrator or refer to the *Administrator's Guide*).

The functionality allows the following tasks:

- Chat
- Admissions notifications
- Pharmaceutical Stock critical levels notifications
- Report sharing

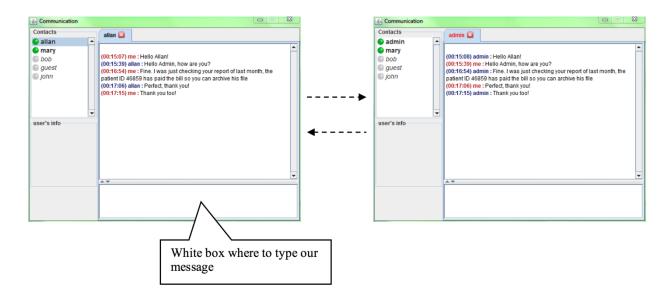
11.2 Chat

By pressing the **Communication**, the **Communication** window is shown:

Scommunication		
Contacts		
🕒 allan 🔺		
mary bob		
🕒 guest		
🕒 john		
•		
user's info		

It shows all users logged into the system. Some of them have a green circle near their name: it means that they are currently logged in the system and they are the only ones that can be interacted with. Others have the grey circle near their name: it means that they logged in at least one time in the past but are not currently using the system.

By double-clicking on an active user (i.e. Allan in the figure above), a chat session can be started, as shown in the figures below:



To send a message to Allan, type the message into the white box at the bottom and then press "ENTER"; the message is immediately sent to Allan; when Allan does the same, his response is immediately received. Other users logged in (i.e. Mary in the figures above) cannot see this private conversation.

11.3 Admission/Discharge Notifications

In the *New Admission* window, in the **Buttons panel** there is a dropdown box, as shown below:

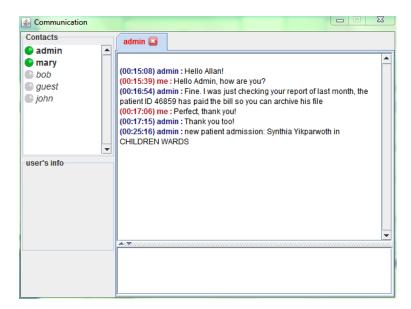
~	New Admission – 🛞					
Code: 297	Admission / Discharge Operation Note					
Name: Drake Synthia Age: 21y 3m 26d Sex: M	Ward From Health Unit O O O O O O O O O O O O O O O O O O O					
ToB: 0-	Admission Date * Admission Type * Malnutrition					
Address	Diagnosis -IN- *					
Gorny boul. 21 Wellington	🔍 Acute Flaccid Paralysis 👻					
Parents						
	Discharge Date Bed Days Discharge Type					
Next of Kin Telephone +542241						
Blood Type	Diagnosis -OUT-					
0-	n. 1 🔍 🔍					
Marital Status Profession						
Single	n. 2					
Patient Notes						
	n. 3					
	* Indicates required fields					
	Save Examination Close Share alert with: nobody V					

The box lists all users currently logged into the system (those with the green circle near the name) and allows to send an alert or not (nobody) when the **Save** button is pressed.

11.3.1 Admission Notifications

If the decision is to send a notification about a new admission for user Allan, when the **Save** button is pressed, Allan sees in his **Communication** window a message like "new patient admission:" followed by the patient's name and the related ward.

An example of the Allan *Communication* window is shown below:



11.3.2 Discharge Notifications

Similarly, notifications can be sent for discharge events. If the decision is to send a notification about a discharge to user Allan when the **Save** button is pressed, Allan sees in his **Communication**

window a message like "discharged patient:" followed by the patient's name and the related Discharge Type.

An example of the Allan *Communication* window is shown below:

Contacts		admin 🔝			
admin mary bob guest john		(00:15:39) me (00:16:54) add patient ID 468 (00:17:06) me (00:17:15) add (00:25:16) add CHILDREN W		file arwoth in	
user's info	•	(00:34:52) adi DISCHARGE	min : discharged patient: Synthia Yikparwo	th for NORMAL	
		*			10.0

11.4 Pharmaceuticals Critical Level Notifications

In the *Stock Movement* window, there is a new box at the bottom, as shown below:

~				Sto	ock Moveme	nt				8
Date		08/09/2022	15:58	+		Refer	ence No.			
Discha	arge Type	Discharge	•							
Destin	nation	MATERNITY	WARD 🔻							
			Туре а со	ode or a d	escriptio	n and j	press EN	TER		
CODE	:	DESC	RIPTION		UNIT/PACK	QTY	UNIT/PACK	TOTAL	LOT NO.	EXPIRING
415	Paracetar	mol 500 MG			1	69000	Units	69000	-4111916415	30/03/2025
		Dele	to For	e Cano	ol Sh	are ale	ert with: N	abody		
		Dele	te <u>S</u> av	e <u>C</u> ano	cei sn	are ale	ert with: No	obody		

The box becomes active and useful only if the movement is going to reduce the selected pharmaceutical below the critical level. Given such an occurrence the event can be shared with another user logged into the system at the given time when the **OK** button is pressed.

Assuming such a notification about this discharging movement is to be shared with user Allan, when the $\underline{O}K$ button is pressed, Allan receives in his *Communication* window a message like

"ALERT:" followed by the pharmaceutical name and the text "is about to end" as shown below:

Scommunication		2
Contacts	admin 💌	
 admin mary bob guest john 	(00:15:08) admin : Hello Allan! (00:15:39) me : Hello Admin, how are you? (00:16:54) admin : Fine. I was just checking your report of last month, the patient ID 46859 has paid the bill so you can archive his file (00:17:06) me : Perfect, thank you! (00:25:16) admin : Thank you too! (00:25:16) admin : new patient admission: Synthia Yikparwoth in CHILDREN WARDS (00:34:52) admin : discharged patient: Synthia Yikparwoth for NORMAL	•
-user's info	IDISCHARGE **** admin is now offline **** admin is now online (00:43:44) admin : ALERT: 4 Dimethyl Aminobenzaldelyde is about to end	

11.5 Report Sharing

In the *Report Launcher* window, there is a new box at the bottom, as shown below:

~	Report Launcher	- 😣
Parameters Selection		
Report OH005 - Count out	patient Month October Year	r 2022 🔻
	Share report with : Nobody 💌 Launch <u>R</u> eport <u>Excel</u> <u>C</u> lose	

This allows for the decision to share a new report with another user logged into the system when the **Launch Report** button is pressed.

Assuming such a notification about this report is to be shared with user Allan when the **Launch Report** button is pressed, Allan sees in his *Communication* window a message like "** admin wants to share with you this report:" followed by the report name and a clickable icon that links Allan to the related report. An example of this message is shown below:

Contacts		admin 🖪		
🕒 admin			nao para uto pin oo you can aronno nio nio	
🕒 mary		(00:17:06) me : Pe	erfect, thank you!	
bob		(00:17:15) admin		
guest			new patient admission: Synthia Yikparwoth in	
john		CHILDREN WARD		
John			: discharged patient: Synthia Yikparwoth for NORM	AL
		DISCHARGE	files	
		*** admin is now		
			: ALERT: 4 Dimethyl Aminobenzaldelyde is about to	band
	-	(00.43.44) dumin	ALEINT. 4 Dimetry Aminobenzaidelyde is about to	
user's info		*** admin wants to	o share with you this	
		report:OH005_op	d_count_monthly_report	
		*** admin wants to	o share with you this	
		report:OH005_op	d_count_monthly_report	
		A . 		

12 Settings (Settings)

12.1 Main Characteristics

Setup and customization of Open Hospital can be performed through the <u>Settings</u> functionality. This feature allows the configuration of all "types" and "data" used in the current Open Hospital implementation.

Submenu: Press the **<u>Settings</u>** *button or "Alt + S" to open the Settings submenu.*



Pressing the <u>Settings</u> button main menu provides access to the *Settings* menu. From the *Settings* menu the following functions are available:

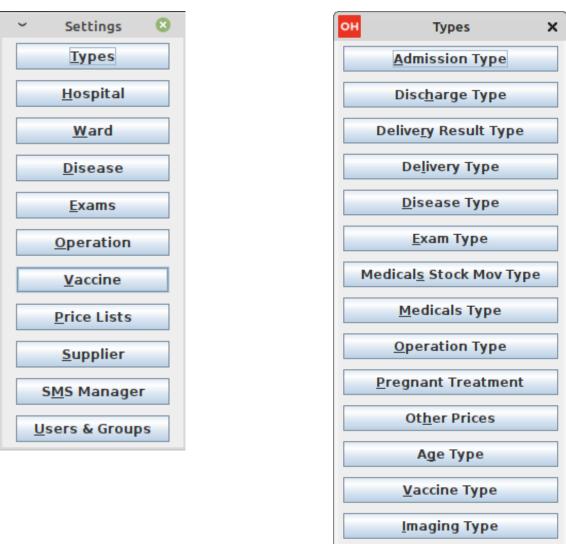
- **Types**: define and manage the various *types* listed in the menu
- Hospital: set some Hospital information (name, address, telephone, email, etc.)
- <u>W</u>ard: define which departments are in the hospital
- + $\underline{\mathbf{D}}$ is ease: define which diseases are diagnosed in the hospital
- **Exams**: define which laboratory exams are performed in the hospital
- **Operation**: define which surgical operations are provided by the hospital
- **<u>V</u>accine**: define which vaccines are given in the hospital
- **Prices lists**: define unitary costs of the services provided by the hospital

- **Supplier**: manage medicals suppliers
- SMS Manager: send SMS or schedule an SMS sending
- Users & Groups: manage information about various users and groups

12.2 Types (<u>T</u>ypes)

Once the **Types** button is pressed in the **Settings** menu, the **Types** menu is presented:

Settings Menu: Press the **Types** button or "Alt + T" to open the Types Menu



From the *Types* menu the definition and management of the following types of functions are possible:

- <u>Admission Type</u>: the way the patient is admitted to the hospital *i.e. Ambulance, Self, Referral, etc.*
- **Discharge Type**: the way the patient is discharged from the hospital *i.e. Healed, Unchanged, Dead, etc.*
- **Delivery Result Type**: the various childbirth results for reporting *i.e. Live Birth, Newborn Death, Fresh Still Birth, etc.*
- **Delivery Type**: the ways the mothers are assisted in childbirth

i.e. Normal Delivery, Caesarean Section, etc.

- **Disease Type**: the way similar diseases are grouped *i.e. Epidemic, Maternal, etc.*
- **Exam Type**: the way similar laboratory exams are grouped+ *i.e. Haematology, Parasitology, Serology, etc.*
- **Medicals Stock Mov Type**: the kind of movements, meant as charge or discharge, that are performed in the Medical Store *i.e. Charge, Discharge, Donation, Correction, etc.*
- <u>Medicals Type</u>: the way similar pharmaceuticals are grouped *i.e. Drugs, Chemical, Laboratory, etc.*
- **Operation Type**: the way similar surgical operations are grouped *i.e. Abdominal, Obstetrical, Orthopaedic, etc.*
- **<u>Pregnant Treatment</u>**: the treatments provided to expectant mothers *i.e. First dose with SP, Second dose with SP, etc.*
- **Ot<u>h</u>er Prices**: extra services the hospital provides (it will be reflected in Prices lists) *i.e. Admission Fee, Food, POP, etc.*
- **Age Type**: the age classifications used by the hospital *i.e. Newborn, Childhood, Adult, Elderly, etc.*
- **Vaccine Type**: the way similar vaccines are grouped *i.e. Child, Adult, Pregnant, etc.*
- **Imaging Type**: the way similar imaging types are grouped *i.e. X-Ray, CT-Scan, NMR, etc.*

12.2.1 Admission Types (Admission Type)

Once the <u>Admission Type</u> button in the *Types* menu is pressed, the *Admission Type Browser* window is shown:

~	Admiss	sion Type Browser	-	2	8
(CODE	DESCRIPTION			
A		AMBULANCE			
A R		REFERRAL			
1		SELF			
	New	<u>E</u> dit <u>D</u> elete <u>C</u> lose	a		

- New: enter a new type (cannot use an existing code).
- **Edit**: edit an existing type (the code cannot be changed).
- **Delete**: delete an existing type (cannot be deleted if it is still used somewhere in the application).
- **<u>C</u>lose**: close the window.

The Admission Types defined are used in the Admission function (see Start the admission of a patient and Discharge of a patient in this document).

12.2.2 Discharge Types (Discharge Type)

Once the **Discharge Type** button in the **Types** menu is pressed, the **Discharge Type Browser** window is shown:

~	Discha	rge Type Browser	-	5	8
C	ODE	DESCRIPTIO	N		
D		DEAD			
ES		ESCAPE			
EQ		NORMAL DISCHARGE			
В		REFERRED			
	<u>N</u> ew	<u>E</u> dit <u>D</u> elete <u>C</u> lo	se		

- <u>N</u>ew: enter a new type (cannot use an existing code).
- **Edit**: edit an existing type (the code cannot be changed).
- **Delete**: delete an existing type (cannot be deleted if still used somewhere in the application).
- <u>Close</u>: close the window.

The Discharge Types defined are used in the Admission function (see Start the admission of a patient and Discharge of a patient in this document).

12.2.3 Delivery Result Types (Delivery Result Type)

Once the **Delivery Result Type** button in the **Types** is pressed, the **Delivery Result Type Browser** window is shown:

~	Delivery	Result Type Browser	-	2	8
COL	DE	DESCRIPTION			
S		FRESH STILL BIRTH			
A		LIVE BIRTH			
В		MASTERATED STILL BIRTH			
M		MATERNAL DEATH			
N		NEWBORN DEATH			
	<u>N</u> ew	<u>E</u> dit <u>D</u> elete <u>C</u> lose			

- New: enter a new type (cannot use an existing code).
- Edit: edit an existing type (the code cannot be changed).
- **Delete**: delete an existing type (cannot be deleted if still used somewhere in the application).
- <u>Close</u>: close the window.

The Delivery Result Types defined are used in the Admission function (see Insert or Modify Delivery data in this document).

12.2.4 Delivery Types (Delivery Type)

Once the **Delivery Type** button in the **Types** menu is pressed, the **Delivery Type Browser** window is shown:

~	Deliv	ery Type E	Browser		-	2	8
CODE			DES	SCRIPTION			
С				BY CESARIA	N SEC	CTIOI	N
N		NORMAL I					
V		DELIVERY	ASSISTED	BY VACUUM	1 EXTR	АСТ	ION
· · · · · · · · · · · · · · · · · · ·		r dia	Delete	Class			
	New	<u>E</u> dit	<u>D</u> elete	<u>C</u> lose			

- <u>N</u>ew: enter a new type (cannot use an existing code).
- **Edit**: edit an existing type (the code cannot be changed).
- **Delete**: delete an existing type (cannot be deleted if still used somewhere in the application).
- **<u>C</u>lose**: close the window.

The Delivery Types defined are used in the Admission function (see Insert or Modify Delivery data in this document).

12.2.5 Disease Types (Disease Type)

Once the **Disease Type** button in the **Types** menu is pressed, the **Disease Type Browser** window is shown:

~	Disea	se Type Browser	-	0	8
(CODE	DESCRIPTION			
ND		1.NOTIFIABLE DISEASES			
OC		2.0THER INFECTIOUS/COMMUNIC	ABLE	DIS	EA
MP		3.MATERNAL AND PERINATAL DI	SEASE	S	
NC		4.NON-COMMUNICABLE DISEASE	S		
AO		5. All Other			
	New	<u>E</u> dit <u>D</u> elete <u>C</u> lose			

- New: enter a new type (cannot use an existing code).
- **Edit**: edit an existing type (the code cannot be changed).
- **Delete**: delete an existing type (cannot be deleted if still used somewhere in the application).
- <u>Close</u>: close the window.

The Disease Types defined are used throughout the application (for example, in the definition of Diseases or in OPD - see Disease and Create a new patient visit in this document).

12.2.6 Exam Types (Exam Type)

Once the **Exam Type** button in the **Types** menu is pressed, the **Exam Type Browser** window is shown:

~	Exan	n Type Browser	-	2	8
	CODE	DESCRIPTION			
HB		1.Haematology			
BT		2.Blood transfusion			
PA		3.Parasitology			
BA		4.Bacteriology			
MC		5.Microscopy			
SE		6. Serology			
CH		7. Chemistry			
OC		8.Occult Blood			
OL		OLD EXAMS			
OT		OTHER			
SP		STOOLPARASITES			
UR		URINALYSIS			
			7		
	<u>N</u> ew	<u>E</u> dit <u>D</u> elete <u>C</u> lose			

- <u>N</u>ew: enter a new type (cannot use an existing code).
- **Edit**: edit an existing type (the code cannot be changed).
- **Delete**: delete an existing type (cannot be deleted if still used somewhere in the application).
- **<u>C</u>lose**: close the window.

The Exam Types defined are used in the Laboratory function (see Laboratory in this document).

12.2.7 Medicals Stock Movement Types (Medicals Stock Mov Type)

Once the **Medicals Stock Mov Type** button in the **Types** menu is pressed, the **Medicals Stock Movement Types Browser** window is shown:

~ Media	al Stock Movement Type Browser		-	2	8
CODE	DESCRIPTION		TYF	ΡE	
charge	Charge	+			
discharge	Discharge	-			
Ne	ew <u>E</u> dit <u>D</u> elete <u>C</u> los	se			

- <u>New</u>: enter a new type (cannot use an existing code).
- **Edit**: edit an existing type (the code cannot be changed).
- **Delete**: delete an existing type (cannot be deleted if still used somewhere in the application).
- **<u>C</u>lose**: close the window.

By pressing the **New** button, the **New Medical Stock Movement Type** window is shown:

~	New Medical Stock Movement Type	8				
Code (max 10 chars):						
Descripti	on:					
Type:	+	-				
	<u>O</u> K <u>C</u> ancel					

The allowed types are "" and "-" and this means that any kind of movements is either a charging () or a discharging (-) of the stock.

Examples are:

• Positive correction (+)

- Negative correction (-)
- Donation (+)
- Lost (-)
- ...

The Medical Stock Movement Types defined are used in the Pharmaceutical Stock function (see Insert Stock Discharging Movement in this document).

12.2.8 Medicals Types (Medicals Type)

Once the **Medicals Type** button in the **Types** menu is pressed, the **Medical Type Browser** window is shown:

~	Medio	cal Type Browser		-	2	8
C	ODE	DESCRIPTI	ON			
К		Chemical				
D		Drugs				
L		Laboratory				
S		Surgery				
1	<u>N</u> ew	<u>E</u> dit <u>D</u> elete <u>C</u> l	ose			

The functions available in this window (similar to other windows in the *Types* menu) are:

- <u>N</u>ew: enter a new type (cannot use an existing code).
- **<u>E</u>dit**: edit an existing type (the code cannot be changed).
- **Delete**: delete an existing type (cannot be deleted if still used somewhere in the application).
- **<u>C</u>lose**: close the window.

The Medical Types defined are used throughout the application (for example, in the Pharmacy function and Pharmaceutical Stock Ward - see Insert a new pharmaceutical and Search Ward Pharmacy movements in this document).

12.2.9 Operation Types (Operation Type)

Once the **Operation Type** button in the **Types** menu is pressed, the **Operation Type Browser** window is shown:

~	Operat	tion Type Browser	-	2	8
(CODE	DESCRIPTION			
AG		ABDOMINAL GENERAL SURGERY			
GY		GYNECOLOGICAL			
MG		MALE GENITOR-URINARY SYSTEM			
OB		OBSTETRICAL			
OR		ORTHOPEDICAL			
OS		OTHERS: SKIN AND SUBCUTANEO	US		
			_		
	<u>N</u> ew	<u>E</u> dit <u>D</u> elete <u>C</u> lose			

The functions available in this window (similar to other windows in the *Types* menu) are:

- New: enter a new type (cannot use an existing code).
- **<u>E</u>dit**: edit an existing type (the code cannot be changed).
- **Delete**: delete an existing type (cannot be deleted if still used somewhere in the application).
- **<u>C</u>lose**: close the window.

The Operation Types defined are used in the Admission function (see Insert or Modify Surgery Data in this document).

12.2.10 Pregnant Treatment Types (Pregnant Treatment Type)

Once the **<u>Pregnant Treatment</u>** button in the *Types* menu is pressed, the *Pregnant Treatment Type Browser* window is shown:

~	Pregnant Tr	eatment Type Browser	-	2	8
	CODE	DESCRIPTION			
A		ANC RE-ATTENDANCE			
S1		FIRST DOSE WITH SP			
11		IMMUNISATION 1			
12		IMMUNISATION 2			
13		IMMUNISATION 3			
N		NEW ANC ATTENDANCE			
S2		SECOND DOSE WITH SP			
	New				
	New	<u>E</u> dit <u>D</u> elete <u>C</u> lose			

- <u>New</u>: enter a new type (cannot use an existing code).
- Edit: edit an existing type (the code cannot be changed).
- **Delete**: delete an existing type (cannot be deleted if still used somewhere in the application).
- **<u>C</u>lose**: close the window.

The Pregnant Treatment Types defined are used in the Admission function (see Insert or Modify Delivery data in this document).

12.2.11 Other Prices (Other Prices)

Once the **Other Prices** button in the **Types** menu is pressed, the **Other Prices Browser** window is shown:

~	Oth	er Price	s Brows	er		- 0 🙁
CODE	DESCRIPTION	OPD	IPD	DAILY	DISCHARGE	UNDEFINED
OTH001	Amount per d		V	~		
l						
	<u>N</u> ew	<u>E</u> dit	De	lete	<u>C</u> lose	

- <u>N</u>ew: enter a new price (cannot use an existing code).
- Edit: edit an existing price (the code can be changed).
- **Delete**: delete an existing price (cannot be deleted if still used somewhere in the application).
- **<u>C</u>lose**: close the window.

To create a new price, press the **<u>New</u>** button, and the *New Price* window is shown:

~	New Price 😣		
Code:	отн		
Description:			
V OPD VI	PD 🗌 Daily 🗌 Discharge 🗌 Undefin	ed	
	<u>O</u> K <u>C</u> ancel		

To insert a new price, provide the following data:

- **Code**: the price code and which should be unique; there are no restrictions on this field since the application uses an internal code to uniquely identify the item
- Description: the price description that may include the code for a faster search
- **OPD**: if the price is applicable with OPD (not yet implemented)
- **IPD**: if the price is applicable with IPD (not yet implemented)
- **Daily**: if the price should be applied for every bed-day (not yet implemented) or just once; if checked, provide a value for "How many days?" when using this item while managing a patient's bill; see the following **Days** window:

~	Days	8
15	How many days? 15	
	OK Cancel	

- **Discharge**: if the item must be treated as a negative value to act as a discharge in the billing statement (i.e., Charge-Off, Free-of-charge, etc.).
- **Undefined**: if the item has no value in the Price List and the amount was set as "on the fly" while editing a bill; if checked, a value for "How much is it?" in the following **Undefined** window must be provided:

~	Undefined	
	How much is it? OK Cancel	

The Other Prices defined are used in the Accounting and Price List functions (see Insert a new bill and Prices in this document).

12.2.12 Age Types (Age Type)

Once the Age Type button in the Types menu is pressed, the Age Type Browser window is shown:

~	 Age Type Browser 			-	ø	8
d0	0	0	Newborn			
dl	1	5	Early Childhood			
d2	6	12	Late Childhood			
d3	13	24	Adolescent			
d4	25	59	Adult			
d5	60	99	Elderly			
	<u>E</u> dit <u>C</u> lose					

Note that age ranges are fixed and only the Administrator can change their values to best fit the health normative in the country.

By pressing the **<u>E</u>dit** button, the table allows modification of the age values and the button changes to **<u>S</u>ave**.

~	Age Type Browser			-	0	8
d0	0	0	Newborn			
dl	1	5	Early Childhood			
d2	6	12	Late Childhood			
d3	13	24	Adolescent			
d4 d5	25	59	Adult			
d5	60	99	Elderly			
<u>Save</u> <u>C</u> lose						

By double-clicking on each value, the value is changed by typing a new value. Then pressing the **Save** button, the new information is stored in the system.

Only integer values are allowed; also, every range must be **contiguous** and may not **overlap** any previous or following value.

For example, in the following case, ranges *Late Childhood* and *Adolescent* are not **contiguous** and ages 14 and 15 are not defined in any range:

~	Age Type Browser			-	2	8
d0	0	0	Newborn			
dl	1	5	Early Childhood			
d2	6	13	Late Childhood			
d3	16	24	Adolescent			
d4 d5	25	59	Adult			
d5	60	99	Elderly			
<u>S</u> ave <u>C</u> lose						

In the following example, the ranges *Late Childhood* and *Adolescent* **overlap** since both start with age 6:

~	Age Type Browser			-	ø	8
d0	0	0	Newborn			
dl	1	5	Early Childhood			
d2	6	13	Late Childhood			
d3	6	24	Adolescent			
d4 d5	25	59	Adult			
d5	60	99	Elderly			
<u>S</u> ave <u>C</u> lose						

The Age Types defined are used in the Patient Extended functionality (see Insert a new Patient Extended in this document).

12.2.13 Vaccine Types (Vaccine Type)

Once the **<u>Vaccine Type</u>** button in the *Types* menu is pressed, the *Vaccine Type Browser* window is shown:

~	Vacci	ne Type Browser	-	2	8
(CODE	DESCRIPTION			
С		Child			
N		No pregnant			
Р		Pregnant			
	New	<u>E</u> dit <u>D</u> elete <u>C</u> lose			

- <u>N</u>ew: enter a new type (cannot use an existing code).
- **Edit**: edit an existing type (the code cannot be changed).
- **Delete**: delete an existing type (cannot be deleted if still used somewhere in the application).
- **<u>C</u>lose**: close the window.

The Vaccine Types defined are used in the Vaccine function (see Vaccines in this document).

12.2.14 Imaging Type (Imaging Type)

Once the **Imaging Type** button in the **Types** menu is pressed, the **Imaging Type Browser** window is shown:

он Ітад	ing Type Browser _ 🗆 🗙
CODE	DESCRIPTION
CTS	CT-Scan
DEF	Default
GEN	General
NRM	NM Resonance
XRA	X-Ray
New	<u>E</u> dit <u>D</u> elete <u>C</u> lose

- <u>N</u>ew: enter a new type (cannot use an existing code).
- **<u>E</u>dit**: edit an existing type (the code cannot be changed).
- **Delete**: delete an existing type (cannot be deleted if still used somewhere in the application).
- <u>Close</u>: close the window.

The Imaging Types defined are used in the imaging Load function (see Imaging Viewer in this document).

12.3 Hospital (<u>H</u>ospital)

Once the **<u>Hospital</u>** button in the *Settings* menu is pressed, the *Hospital Information* window is shown:

~	Hospital Information – 😣				
Name:	St. Luke HOSPITAL - Angal				
Address:	P.O. BOX 85 - NEBBI				
City:	ANGAL				
Telephone:	+256 0472621076				
Fax number:	+256 0				
Email address:	angal@ucmb.ug.co.				
Currency Code:	UGX				
Visit start hour:	6:30 +				
Visit end hour:	20:00 +				
Visit duration:	30				
Edit Update Close					

By pressing the **<u>E</u>dit** button, it is possible to modify the hospital information:

~	Hospital Information – 🚫				
Name:	St. Luke HOSPITAL - Angal				
Address:	P.O. BOX 85 - NEBBI				
City:	ANGAL				
Telephone:	+256 0472621076				
Fax number:	+256 0				
Email address:	angal@ucmb.ug.co.				
Currency Code:	UGX				
Visit start hour:	6:30 +				
Visit end hour:	20:00 +				
Visit duration:	30				
Edit Update Close					

By pressing the **<u>Update</u>** button, the new information is stored in the system and is reflected throughout the entire application (for example, in the reports heading - see Statistics in this document).

12.4 Ward (<u>W</u>ard)

Once the **<u>W</u>ard** button in the **Settings** menu is pressed, the **Ward Browser** window is shown:

CODE NAME TELEPHONE FAX E-MAIL BEDS NURSES DOCTORS HAS OPD HAS PHA C CHILDREN WARD 219 35 18 2	он	H Ward Browser _ D :						_ = ×					
F FEMALE WARD 218 41 15 4 Image: Constraint of the state of th	COE	E NAME	TELEPHONE	FAX	E-MAIL	BEDS	NURSES	DOCTORS	HAS OPD	HAS PHA	MALE	FEMALE	DURATION
I MALE WARD 210 53 14 4 ✓ M MATERNITY WARD 211 67 19 4 ✓ ✓	С	CHILDREN WARD	219			35	18	2		L_	~		30
M MATERNITY WARD 211 67 19 4	F	FEMALE WARD	218				15	4					30
	1	MALE WARD	210					4			~		30
OPD 0PD 212 0 1 1 2 2								4					30
	OPD	OPD	212			0	1	1	~	V	V	~	15
New Edit Delete Close													

The functions available in this window are:

- <u>N</u>ew: enter a new ward (cannot use an existing code).
- Edit: edit an existing ward (the code cannot be changed).
- **Delete**: delete an existing ward (cannot be deleted if still used somewhere in the application).
- **<u>C</u>lose**: close the window.

By pressing the **<u>New</u>** button, the *New Ward* window is shown:

он New Ward	×				
Code *	Т				
Name *	MALE WARD 2				
Telephone	233				
Fax					
E-mail					
Number of beds *	100				
Number of nurses *	5				
Number of doctors *	2				
Visit duration *	30				
Ward with OPD					
✓ Ward with pharmacy					
Male Ward					
Eemale Ward					
	* Required fields				

To insert a new ward, provide the following required inputs:

- Code: the ward code (it must be unique)
- Name: the name of the ward

- **Number of beds**: the value is shown in the admission module to check for available beds; 0 zero beds wards will be not shown in the admission module
- Number of nurses: it may be shown in some reports (0 zero is allowed)
- Number of doctors: it may be shown in some reports (0 zero is allowed)
- Visit duration: length of a visit (in minutes and must be greater than zero)
- Ward with OPD: if checked, it means that the ward will also be available in the OPD Extended mode
- Ward with pharmacy: it is used in Pharmaceuticals Stock; if checked, it means that the ward can be a destination for discharging movements; otherwise it will be not shown in the list
- Male Ward: if it is a male Ward
- Female Ward: if it is a female Ward



Maternity (M) and OPD (OPD) wards are *built-in* wards and cannot be deleted, although they can be modified as needed.

The wards defined here are used throughout the entire application. See, for example, the Admission module, Pharmaceuticals Stock and Pharmaceuticals Stock Ward (see Admission/Patient, Pharmaceutical Stock and Pharmaceuticals Stock Ward in this document).

12.5 Disease (<u>D</u>isease)

Once the **Disease** button in the **Settings** menu is pressed, the **Diseases Browser** window is shown:

~	Diseases Br	rowser – 🖓 🖸				
CODE	TYPE	NAME				
28	3.MATERNAL AND PERINATAL DISEASES	Abortions				
1	1.NOTIFIABLE DISEASES	Acute Flaccid Paralysis				
106	4.NON-COMMUNICABLE DISEASES	Acute renal failure				
107	4.NON-COMMUNICABLE DISEASES	Acute sepsis				
29	2.0THER INFECTIOUS/COMMUNICABLE DISEASES	AIDS				
75	4.NON-COMMUNICABLE DISEASES	Alcohol and drug abuse				
49	5. All Other	All Other DISEASEs				
12	4.NON-COMMUNICABLE DISEASES	Anaemia				
82	4.NON-COMMUNICABLE DISEASES	Animal/snake bite				
71	4.NON-COMMUNICABLE DISEASES	Anxiety disorders				
68	4.NON-COMMUNICABLE DISEASES	Asthma				
93	4.NON-COMMUNICABLE DISEASES	Benine neoplasm"s (all type)				
94	4.NON-COMMUNICABLE DISEASES	Cancer of the breast				
95	1.NOTIFIABLE DISEASES	Cancer of the prostate				
98	4.NON-COMMUNICABLE DISEASES Caposis and other skin cancers					
103	4.NON-COMMUNICABLE DISEASES	Cardiac arrest				
102	4.NON-COMMUNICABLE DISEASES	Cerebro-vascular event				
76	4.NON-COMMUNICABLE DISEASES	Childhood and mentle disorders				
2	1.NOTIFIABLE DISEASES	Cholera				
92	4.NON-COMMUNICABLE DISEASES	Comlpication and surgical care				
91	1.NOTIFIABLE DISEASES	Congenital malformations and chromosome abnormal				
127	1.NOTIFIABLE DISEASES	Covid-19				
101	4.NON-COMMUNICABLE DISEASES	Curable Ulcers				
56	2.0THER INFECTIOUS/COMMUNICABLE DISEASES	Death in OPD				
13	4.NON-COMMUNICABLE DISEASES	Dental DISEASE and conditions				
Select	Select type ALL v New Edit Delete Close					

The functions available in this window are:

- Selected Type: filter the list by selecting only one Disease Type.
- <u>N</u>ew: enter a new disease (cannot use an existing code).
- **<u>E</u>dit**: edit an existing disease (the code cannot be changed).
- **Delete**: delete an existing disease (it is set as not present in OPD or in IPD).

• <u>Close</u>: close the window.

By pressing the **<u>E</u>dit** button, the *Edit Disease* window is shown:

~	Edit Disease					
Туре	1.NOTIFIABLE DISEASES					
Code	95					
Description	Cancer of the prostate					
	OPD 🗹 IPD -IN- 🗹 IPD -OUT-					
	<u>O</u> K <u>C</u> ancel					

In editing mode, the code cannot be changed and the only modifications allowed are to the Type, the Description and if the disease should appear only in OPD, or Admissions, or in both.

By removing the check from all the checkboxes (OPD, IPD -IN-, and IPD -OUT-), a **Delete** action is performed, disabling the disease from appearing in the application. This action can be undone by editing the disease again.

The diseases defined are reflected throughout the entire application, like in the Admission module and the OPD module (see Admission/Patient and Outpatient Department Management in this document).

12.6 Exam (<u>E</u>xams)

Once the **Exams** button in the **Settings** menu is pressed, the **Exam Browser** window is shown:

					· · 😢
		Search			
CODE	TYPE	DESCRIPTION	PROC	DEFAULT	
01.01	1.Haematology	1.1 HB	1	>=12 (NORMAL)	
01.02	1.Haematology	1.2 WBC Count	1	4000 - 7000 (NORMAL)	
01.03	1.Haematology	1.3 Differential	1		
01.04	1.Haematology	1.4 Film Comment	1	0	
01.05	1.Haematology	1.5 ESR	1	NORMAL	
01.06	1.Haematology	1.6 Sickling Test	1	NEGATIVE	
02.01	2.Blood transfusion	2.1 Grouping	1		
02.02	2.Blood transfusion	2.2 Comb's Test	1	NEGATIVE	
03.01	3.Parasitology	3.1 Blood Slide (Malaria)	1	NEGATIVE	
03.02	3.Parasitology	3.2 Blood Slide (OTHERS, E.G. TRIUPHANOS	1	NEGATIVE	
03.021	3.Parasitology	3.21 Trypanosomiasis	1	NEGATIVE	
03.022	3.Parasitology	3.22 MICROFILARIA	1	NEGATIVE	
03.023	3.Parasitology	3.23 LEISHMANIA	1	NEGATIVE	
03.024	3.Parasitology	3.24 BORRELIA	1	NEGATIVE	
03.03	3.Parasitology	3.3 STOOL MICROSCOPY	2		
03.04	3.Parasitology	3.4 URINE MICROSCOPY	1	NEGATIVE	
03.05	3.Parasitology	3.5 TISSUE MICROSCOPY	1	NEGATIVE	
03.06	3.Parasitology	3.6 CSF WET PREP	1	NEGATIVE	
04.01	4.Bacteriology	4.1 CULTURE AND SENSITIVITY (C&S) FOR HA	. 1	NEGATIVE	
04.02	4.Bacteriology	4.2 C&S FOR SALMONELA TYPHI	1	NEGATIVE	
04.02	A Pactoriology	A 2 CES EOD VIDDO CUOI EDA	la	NEGATIVE	

The functions available in this window are:

- **Search**: subset the list by typing a keyword.
- Select Type: subset the list by selecting only one Exam Type.
- New: enter a new exam (cannot use an existing code).
- **<u>E</u>dit**: edit an existing exam (the code cannot be changed).
- **Delete**: delete an existing exam (it is set as not present in OPD or in IPD).

- **<u>R</u>esults**: define possible results for the selected exam.
- <u>Close</u>: close the window.

By pressing the **<u>E</u>dit** button, the *Edit Exam* window is shown:

~	Edit Exam	\otimes
Туре:	1.Haematology	-
Code:	01.01	
Description:	1.1 HB	
Procedure:	1	-
Default:	>=12 (NORMAL)	
	<u>O</u> K <u>Cancel</u>	

In editing mode, the code or procedure cannot be changed and the only modifications allowed are to the Type, the Description and the default value.

By pressing the **<u>New</u>** button, the *New Exam* window is shown:

~	New Exam 😣
Type:	1.Haematology 🗸 🗸
Code:	
Description:	
Procedure:	1
Default:	
	<u>O</u> K <u>C</u> ancel

To insert a new Exam, the following data must be provided:

- Type: the Exam Type (see Exam Types in this document).
- Code: a unique code; a warning window will appear if not unique.
- **Description**: the exam name.
- Procedure: the kind of results for this exam (see Results in this document).
- **Default**: a default value among the results that are going to be defined (see Results in this document).

12.6.1 Results (Results)

Once an exam is defined, the next step is the definition of the set of results the exam can have. First, select the exam in the *Exam Browser* window and then press the **<u>Re</u>sults** button.

In Open Hospital, three kinds of results can be defined, called "Procedure":

- Procedure 1: a set of values as description; only one will be selectable as exam Single Result
- Procedure 2: a set of Positive/Negative values; all of them will figure as exam Multiple Results
- **Procedure 3**: a specific value to be input manually; it will show an **input field** at the time of the exam registration

The difference between **Procedures (1, 2, 3)** can be seen in the Laboratory module (see Create a new laboratory exam and Laboratory Multiple Insert in this document).

Because for <u>Procedure 3</u> the exact value is not known, the <u>**Result**</u> button is disabled in this case:

			6	earch								
			5	aren								
CODE		TYPE 🔺				DES	SCRIPTION			PROC	DEFAULT	
1.01	1.Haematology				1.1 HB				1		>=12 (NORMAL)	
.1.1	1.Haematology					(Procedure	3)		3			
1.02	1.Haematology				1.2 WBC				1		4000 - 7000 (NORMAL)	
1.03	1.Haematology				1.3 Diffe				1			
1.04	1.Haematology					Comment			1		0	
1.05	1.Haematology				1.5 ESR				1		NORMAL	
8.01	8.Occult Blood					JLT BLOOD			1		NEGATIVE	
1.06	1.Haematology				1.6 Sickl				1		NEGATIVE	
2.01	2.Blood transfusion				2.1 Grou	ping			1			
2.02	2.Blood transfusion				2.2 Com				1		NEGATIVE	
3.02	3.Parasitology				3.2 Bloo	d Slide (OTH	IERS, E.G. TRI	UPHANOS	1		NEGATIVE	
3.021	3.Parasitology				3.21 Try	anosomias	is		1		NEGATIVE	
3.022	3.Parasitology					ROFILARIA			1		NEGATIVE	
3.023	3.Parasitology				3.23 LEIS	HMANIA			1		NEGATIVE	
3.01	3.Parasitology				3.1 Bloo	d Slide (Mali	aria)		1		NEGATIVE	
3.024	3.Parasitology				3.24 BOP				1		NEGATIVE	
3.03	3.Parasitology				3.3 STOC	L MICROSCO	DPY		2			
3.04	3.Parasitology				3.4 URIN	E MICROSCO	PY		1		NEGATIVE	
3.05	3.Parasitology					JE MICROSC	OPY		1		NEGATIVE	
3.06	3.Parasitology					VET PREP			1		NEGATIVE	
4.01	4. Pactoriology				ALCULT	LIDE AND CE	NICITA/ITV (CA	C) EOD UA	1		NEGATIVE	

The two remaining possibilities are shown below:

~	1.1 HB Results 🛛 😒	~	URINALYSIS Results
CODE	DESCRIPTION	CODE	DESCRIPTION
87	6 - 12	79	BILIRUBIN
88	< 6	81	HCG
89	>=12 (NORMAL)	80	PROTEIN
		76	SEDIMENTS
		77	SUGAR
		78	UROBILINOGEN
1	<u>V</u> ew <u>D</u> elete <u>C</u> lose	Δ	lew Delete Close

The functions available in both windows are:

- <u>N</u>ew: enter a new result.
- **<u>D</u>elete**: delete a defined result.
- **<u>C</u>lose**: close the window.

12.7 Operations (Operation)

Once the **Operation** button in the **Settings** menu is pressed, the **Operations Browser** window is shown:

~		Operations Browser	- 0 🙁
ID	TYPE	NAME	CONTEXT
45	ABDOMINAL GENERAL SURGERY	Abdominal Tumours	OPD / ADMISSION
13	GYNECOLOGICAL	Acute abdomen	OPD / ADMISSION
43	ABDOMINAL GENERAL SURGERY	Appendicitis	OPD / ADMISSION
30	MALE GENITOR-URINARY SYSTEM	Bladder biopsy	OPD / ADMISSION
1	OBSTETRICAL	Caesarian section	OPD / ADMISSION
44	ABDOMINAL GENERAL SURGERY	Cholecystitis	OPD / ADMISSION
21	MALE GENITOR-URINARY SYSTEM	circumcision	OPD / ADMISSION
20	GYNECOLOGICAL	Cystorele	OPD / ADMISSION
51	OTHERS: SKIN AND SUBCUTANEOUS	Debridement	OPD / ADMISSION
11	OBSTETRICAL	Dilatation and curettage	OPD / ADMISSION
24	MALE GENITOR-URINARY SYSTEM	dorsal slit-paraphimosis	OPD / ADMISSION
14	GYNECOLOGICAL	Ectopic pregnancy	OPD / ADMISSION
3	OBSTETRICAL	elective	OPD / ADMISSION
2	OBSTETRICAL	emergency	OPD / ADMISSION
34	ABDOMINAL GENERAL SURGERY	Epigastrical Hernia	OPD / ADMISSION
8	OBSTETRICAL	Evacuations	OPD / ADMISSION
31	ABDOMINAL GENERAL SURGERY	Hernia (inguinal & femoral)	OPD / ADMISSION
26	MALE GENITOR-URINARY SYSTEM	Hydroceletomy	OPD / ADMISSION
4	OBSTETRICAL	Hysterectomy	OPD / ADMISSION
7	OBSTETRICAL	Hysterectomy	OPD / ADMISSION
50	OTHERS: SKIN AND SUBCUTANEOUS	Incission & drainage	OPD / ADMISSION
9	OBSTETRICAL	Incomplete abortion	OPD / ADMISSION
6	OBSTETRICAL	Injured uterus	OPD / ADMISSION
37	ABDOMINAL GENERAL SURGERY	Intestinal obstruction	OPD / ADMISSION
40	ABDOMINAL GENERAL SURGERY	Laparatomy	OPD / ADMISSION
48	ORTHOPEDICAL	Lower limb	OPD / ADMISSION
38	ABDOMINAL GENERAL SURGERY	Mechanical	OPD / ADMISSION
52	OTHERS: SKIN AND SUBCUTANEOUS	Mise -a- plat	OPD / ADMISSION
33	ABDOMINAL GENERAL SURGERY	Non strangulated	OPD / ADMISSION
49	ORTHOPEDICAL	Osteomyelitis - sequestrectomy	OPD / ADMISSION
18	GYNECOLOGICAL	Ovarian tumours	OPD / ADMISSION
23	MALE GENITOR-URINARY SYSTEM	paraphimosis	OPD / ADMISSION
16	GYNECOLOGICAL	Pelvic abscess	OPD / ADMISSION
41	ABDOMINAL GENERAL SURGERY	Penetrating abdominal injuries	OPD / ADMISSION
15	GYNECOLOGICAL	Peritonitis	OPD / ADMISSION
42	ABDOMINAL GENERAL SURGERY	Peritonitis	OPD / ADMISSION
22	MALE GENITOR-URINARY SYSTEM	phimosis	OPD / ADMISSION
	MALE GENITOR-URINARY SYSTEM	Prostate biopsy	OPD / ADMISSION
	Select type ALL	▼ <u>N</u> ew <u>E</u> dit <u>D</u> elete	Close

The functions available in this window are:

- Selected type: filter the list by selecting only one Operation Type.
- <u>N</u>ew: enter a new operation (cannot use an existing code).
- **Edit**: edit an existing operation (the code cannot be changed).
- **Delete**: delete an existing operation (it is set as not present in OPD or in IPD).
- <u>Close</u>: close the window.

By pressing the **<u>E</u>dit** button, the *Edit Operation* window is shown:

~	Edit Operation	\otimes				
Туре:	ABDOMINAL GENERAL SURGERY	-				
Code:	45					
Description:	Abdominal Tumours					
	Major O Minor					
Context:	OPD / ADMISSION	-				
	<u>O</u> K <u>C</u> ancel					

In editing mode, the code cannot be changed; only modification of the Type, the Description and whether the operation concerns Major or Minor surgery for statistical purposes (not yet implemented) are allowed.

The operation's context can also be changed: *OPD / ADMISSION, ADMISSION, OPD*.

The Operations defined are used throughout the entire application, like in the Admission module (see Insert or Modify Surgery data in this document).

12.8 Vaccine (Vaccine)

Once the <u>Vaccine</u> button in the *Settings* menu is pressed, the *Vaccine Browser* window as shown below:

~	Vaccine Bro	owser – o	8
CODE	TYPE	DESCRIPTION	
1	Child	BCG	-
6	Child	DPT1-HepB+Hib1	
7	Child	DPT 2 - HepB + Hib 1	
8	Child	DPT 3 - HepB + Hib 1	
9	Child	MEASLES	
	Child	POLIO 0 C	
3	Child	POLIO 1 C	
4	Child	POLIO 2 C	
5	Child	POLIO 3 C	
	Pregnant	TT VACCINE DOSE 1	
	No pregnant	TT VACCINE DOSE 2	
11	Pregnant	TT VACCINE DOSE 2	
	No pregnant	TT VACCINE DOSE 3	
	Pregnant	TT VACCINE DOSE 3	
	No pregnant	TT VACCINE DOSE 4	
	Pregnant	TT VACCINE DOSE 4	
	No pregnant	TT VACCINE DOSE 5	
1.4	Dragnant		
	Select type ALL 🗸	<u>N</u> ew <u>E</u> dit <u>D</u> elete <u>C</u> lose	

The functions available in this window are:

- Selected type: filter the list by selecting only one Vaccine Type.
- <u>N</u>ew: enter a new vaccine (cannot use an existing code).
- **<u>E</u>dit**: edit an existing vaccine (the code cannot be changed).
- **Delete**: delete an existing vaccine (it is set as not present in OPD or in IPD).
- **<u>C</u>lose**: close the window.

By pressing the **<u>E</u>dit** button, the *Edit Vaccine* window is shown:

~	Edit Vaccine	
Туре:	Child	-
Code:	1	
Description:	BCG	
	<u>O</u> K <u>C</u> ancel	

In editing mode, the code cannot be changed; only modification of the Type and the Description is permitted.

The vaccines defined are used throughout the entire application, like in the Vaccine module (see Vaccines in this document).

12.9 Prices (Price Lists)

Once the **Price Lists** button in the **Settings** menu is pressed, the **Price Browser** window is shown:

Price Browser	- 0 😢
Basic BASIC PRICE LIST (FCFA)	<u>M</u> anage Lists
NAME	PRICES
Basic Exams I.1 HB I.1.1 HB (Procedure 3) I.2 WBC Count I.3 Differential I.4 Film Comment I.5 ESR I.6 Sickling Test I.6 Sickling Test I.16 Sickling Test I.16 Sickling Test I.16 Sickling Test I.16 Sickling Test I.16 Sickling Test I.16 Sickling Test I.17 grouping I.2 Comb's Test I.18 Blood Slide (Malaria) I.2 Blood Slide (OTHERS, E.G. TRIUPHANOSOMIAS, MICRIFILARIA, LEI I.2.1 Trypanosomiasis I.2.2 MICROFILARIA I.2.2 MICROFILARIA I.2.3 LEISHMANIA I.2.4 BORRELIA I.2.4 BORRELIA I.2.4 URINE MICROSCOPY I.2 S TISSUE MICROSCOPY	10 0 10 12 8 14 14 14 14 10 0 10 12 15 12 12 12 12 12 15 12 12 15 12 12 15 12 12 15 12 15 12 15 15 16 16 16 16 16 16 16 16 16 16
<u>Save</u> <u>Printing</u> <u>Cancel</u>	

The functions available in this window are:

- **Save**: save any modifications made to the price list.
- **<u>P</u>rinting**: print the current price list.
- **<u>C</u>ancel**: close the window.
- Switch price list: focus on a different price list by selecting it in the upper-left corner of the window.
- <u>Manage Lists</u>: define how many and which price list will be available in the application (see Price Lists in this document).

The *Price Browser* window shows the list of all prices in the selected price lists; the system automatically creates a price for every exam (see Exam), operation (see Operations) and medical (see Pharmaceuticals) defined in the system, plus other prices defined in Other Prices module (see Other Prices).

To modify a price, just double-click on it and type the new price.



If a price has been defined as "undefined" (see Other Prices), it will appear as 0 (zero) and cannot be modified.



Exams', operations' and medicals' prices are automatically created as OPD, IPD, not "daily", not "undefined", and not "discharge"; see Other Prices for more information.

When all the modifications are made, the changes can be stored permanently in the system by pressing the **Save** button. A confirmation message reports the success of the operation:



12.9.1 Price Lists (<u>Manage Lists</u>)

Once the <u>Manage Lists</u> button in the **Price Browser** window is pressed, the List Browser window is shown:

~	Lis	t Browser	- 0 🙁
ID	NAME	DESCRIPTION	CURRENCY
LIST001	Basic	Basic price list	FCFA
<u>N</u> e	w Co <u>p</u> y	<u>E</u> dit <u>D</u> elete <u>C</u> los	se

The functions available in this window are:

- <u>N</u>ew: enter a new price list.
- **Copy**: create a new price list as a copy of another one.
- **<u>E</u>dit**: edit an existing price list.
- **Delete**: delete an existing price list.
- **<u>C</u>lose**: close the window.

After selecting a list to copy, press the **Copy** button and the system prompts with a series of windows asking:

- 1. a **Name** of the new price list
- 2. a **Multiplier** for all prices in the selected price list
- 3. a Rounding Factor for all prices in the new price list

A confirmation message reports the success of the operation:



By default, the new list is created with the following information:

ID: "aCode"

NAME: the same name provided in the step by step copying procedure

DESCRIPTION: "a Description"

CURRENCY: the currency of the selected price list

Once the copy has been created, the information can be changed by editing the price list just created.

By pressing the **<u>E</u>dit** button, the *Edit List* window is shown:

~	Edit List	8	
Code *	LIST001		
Name*	Basic		
Description*	Basic price list		
Currency*	FCFA		
* Required fields			
	<u>O</u> K <u>C</u> ancel		

In editing mode, any of the data related to the list can be changed.

The lists defined are used in the Accounting module (see Insert a new bill in this document).

12.10 Supplier (Supplier)

Once the **Supplier** button in the **Settings** menu is pressed, the **Supplier Browser** window is shown:

				Supplier Browser				- 0
>	NAME	ADDRESS	TAX NUMBER ID	TELEPHONE	FAX	E-MAIL	NOTE	DELETED
JMS								
Ent	erpise Limited	Sesame Strett - 73149 New		+22.243454252	+22.243454252	info@enterprise.com		
				New Edit Delete	Close			

The functions available in this window are:

- <u>N</u>ew: insert a new supplier.
- **<u>E</u>dit**: edit an existing supplier.
- **<u>D</u>elete**: delete a supplier.
- **<u>C</u>lose**: close the window.

The *Supplier Browser* window shows the list of all the suppliers in the system.

To add a supplier, click the <u>New</u> button to access the *New Supplier* window as shown below:

~	New Supplier	8
ID:		
Name: *		
Address:		
Tax Number ID:		
Telephone:		
Fax number:		
E-mail:		
Note:		
* Required fields:		
	<u>O</u> K <u>C</u> ancel	

The information associated with a new supplier is:

- Name: is the supplier's name (it is the only required field).
- Address: is the supplier's address.
- Tax Number ID: is the supplier's tax number.
- Telephone: is the supplier's phone number.
- **Fax number**: is the supplier's FAX number.
- E-mail: is the supplier's email address.
- Note: Additional notes about the supplier.

When the data is entered, click the **OK** button to save the new supplier.

To edit the supplier's information, in the *Supplier Browser* highlight the supplier and click on the **Edit** button to open the *Edit Supplier* window. After performing the necessary modifications, click the **OK** button to save the changes.

To delete a supplier, in the *Supplier Browser* highlight the supplier and click on the <u>Delete</u> button to remove the selected Supplier.

12.11 SMS Manager (SMS Manager)



SMS pricing is set and collected by the SMS Provider (GSM or HTTP) and is related to or controlled by this software.



Sending SMS in Open Hospital requires that the Gateway is well configured. Either a GSM gateway or WebApi Gateway can be used. Ask the Administrator about enabling this function or refer to the *Administrator's Guide*.

Once the **SMS Manager** button in the **Settings** menu is pressed, the **SMS Manager** window is shown:

он		SMS Man	ager			-	×
	Date From:	18/07/2022	Date	To: 20/07/202	2 🛅		
DATE	SCHED. DATE	TELEPHON	E	SMS	S	SENT	
19/07/2022 08:02	18/07/2022 08:02	0657059061	T	ne test is compl	ete		
	18/07/2022 18:04	+1443521111		ne lab work is a			
19/07/2022 08:05	20/07/2022 08:13	4723360054	P	ease call to sch	nedule an a		
		<u>N</u> ew <u>D</u> e	ete	<u>C</u> lose			

The functions available in this window are:

- <u>N</u>ew: send a new SMS.
- **<u>D</u>elete**: delete an SMS.
- **<u>C</u>lose**: close the window.

It is also possible to filter the SMS list by a date range.

To send a new SMS, click the <u>New</u> button to access the *New SMS* window:

~	New SMS	8
Scheduled Date	20/07/2022 🛅 7:45 🔻	
Number		
	Characters	s 160
	<u>O</u> K <u>C</u> ancel	

In order to insert a new SMS, the following data is required:

- **Scheduled Date**: use this field to send an SMS in the future. Use the current date and time to send the SMS immediately.
- **Number**: the recipient of the SMS. Select a patient by clicking the button **•**. The phone number of the selected patient is automatically inserted.
- **SMS**: type the text of the SMS in the white space (maximum of 160 characters).

Then click $\underline{O}K$ to save the new SMS. If the scheduled date and time are now, the SMS is sent immediately.

To delete an SMS, highlight the SMS and click the **<u>D</u>elete** button to delete the SMS.

12.12 Users & Groups (Users & Groups)

The User Menu can be enabled or disabled by changing the *SINGLEUSER* flag in the configuration file. Ask the Administrator to enable/disable this function or refer to the *Administrator's Guide*.

If *SINGLEUSER* is set to NO, the following login window is shown when the program starts:

~	Login	8
Userid:	admin	-
Password:		
	<u>S</u> ubmit <u>C</u> ancel	

Once one has successfully logged into the system, the <u>Users & Groups</u> button in the <u>Settings</u> submenu is available, if enabled by the Administrator.

Once the <u>U</u>sers & Groups button in the Settings submenu is pressed, the Users & Groups submenu is shown:

~	Users & Groups	8
	<u>U</u> sers	
	<u>G</u> roups	

Open Hospital allows the management of users organized into groups; each group is characterized by different permissions assigned by the Administrator.

Before registering a new user in the system, ensure that there is a group defined with the related permissions to which the user should have access.

12.12.1 Groups (<u>G</u>roups)

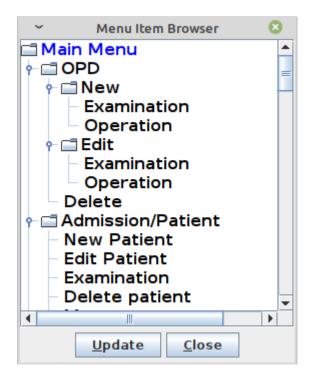
Once the **<u>G</u>roups** button in the **Users** submenu is pressed, the **Groups Browser** window is shown:

~	Groups Br	owser	- 0	6	3
	GROUP	DESCRIPTION			
admin		USER with all the privileges			
guest		Read Only Users			
	<u>E</u> dit <u>N</u> ew Group	Menu Delete Close			

The functions available in this window are:

- **Edit**: edit an existing group (only the description can be changed).
- <u>N</u>ew: enter a new group.
- **Group**<u>M</u>**enu**: define rights and permission for a selected group.
- **<u>D</u>elete**: delete an existing group.
- **<u>C</u>lose**: close the window.

By pressing the **Group**<u>M</u>**enu** button, the *Menu Item Browser* window is shown:

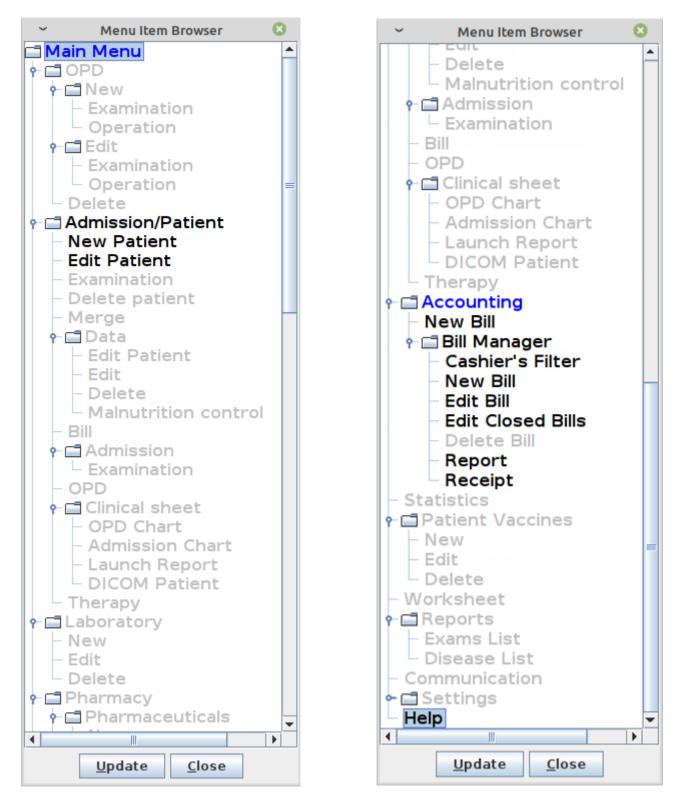


The window shows the full set of functions available in Open Hospital in a tree format:

- main is the "trunk": the main menu
- Blue nodes are the "branches": menus and windows
- Black nodes are the "leaves": buttons and functions

Double-clicking on each branch or leaf enables or disables that function or set of functions for the selected group.

For instance, the group "Registration Office" and the group "Cashiers" may have the following group permission configurations:



So, the Registration Office group can only use the Admission/Patient module to insert and edit patients, while the Cashiers group can only use the Accounting module to produce bills.

So, the "main menu" for each user registered in the Registration Office group and for each one in the Cashiers group is shown as follows:

он	_ × _	он	_ ×
	User: John		User: Katy
	Admission/Patient		A <u>c</u> counting
	<u>H</u> elp		<u>H</u> elp
	<u>L</u> ogout		Logout
NTITAE		NTT N	
ITAMAROUNI		N HI I	
NTAL		NTAL	
OH DEN		OH DEN	
ō		ō	

12.12.2 Users (<u>U</u>sers)

Once the **Users** button in the **Users & Groups** submenu is pressed, the **User Browser** window is shown:

~	User Browser	- * 😮
USER	GROUP	DESCRIPTION
admin	admin	administrator
Allan	admin	
Bob	admin	
guest	guest	guest
John	admin	
Judith	Cashiers	Cashier
Katy	Registration Office	Receptionist
Mary	admin	
Select group: ALL	▼ <u>N</u> ew <u>E</u> dit	<u>R</u> eset Password <u>D</u> elete <u>C</u> lose

The functions available in this window are:

- **Selected group**: filter the list by selecting only one group.
- **<u>New</u>**: enter a new user (cannot use the same name).
- **<u>E</u>dit**: edit an existing user (the password cannot be changed).

- **<u>R</u>eset Password**: change the password for an existing user.
- **<u>D</u>elete**: delete an existing user.
- <u>Close</u>: close the window.

By pressing the **<u>E</u>dit** button, the *Edit User* window is shown:

~	Edit User	\otimes
Group:	Registration Office	-
Name:	Кау	
Description:	Receptionist	
	<u>O</u> K <u>C</u> ancel	

In editing mode, only the group and the description can be modified.

13 Worksheet (Worksheet)

The **Worksheet** function allows the management and printing of the list of appointments scheduled.

Click the mouse on the button or press "Alt + W" to enter the **Worksheet** *page:*

он	_ ×
	User: admin
	<u>O</u> PD
	<u>P</u> harmacy
	<u>L</u> aboratory
	<u>Admission/Patient</u>
	Accounting
	S <u>t</u> atistics
	Vaccines
AMATECI A TETAR	<u>W</u> orksheet
INDUZ	<u>R</u> eports
TVT	<u>S</u> ettings
DPEN	<u>H</u> elp
ō	Logout

The *Worksheet* module works at the Ward (Department) level; therefore, a ward must first be selected:

~	Worksheet	- * 😣
Select a Ward		
		
CHILDREN WARD		
FEMALE WARD MALE WARD		
MATERNITY WARD		

Once one has selected the ward (it is possible to switch to another ward at any time), a two-column appointment schedule is shown with the appointments/services scheduled for today (on the left) and tomorrow (on the right):

~		Works	heet		- 😣
Select a Ward	IALE WARD	<u>G</u> o to date:	29/07/2022	Today	
1	29/07/2022		30/07/2022		
0	Visit 6:30 - (Pat. ID: 505) - Curtney Gina – N/D 8:10 - (Pat. ID: 512) - Millman Enriquetta 3:10 - (Pat. ID: 560) - Zoey Watkins - N/C	(20Min) - N/D (20Min)	Visits 09:30 - (Pat. ID: 510) - Racuba Scottie - N/D (20 10:50 - (Pat. ID: 519) - Jeanna Rickember - N/D (2		Next->
	Add Visit Remove Visit	Print this day's visits (1)	Add Visit Remove Visit Pr	int this day's visits (2)	Oclose

One can either select another date with the **Go to date** field, or reset the schedule back to today with the button **Today**. In either case, the window <u>always</u> shows the chosen date on the left and the following day on the right.

The functions available in this window are:

- Add Visit: schedule a new visit for a specific date (on the left or on the right).
- **Remove Visit**: remove a visit for a specific date (on the left or on the right).
- **Print this day's visits**: print the specific date scheduled visits.
- **Next** \rightarrow : see the schedule for the following day.
- ← **Prev.**: see the schedule for the previous day.
- <u>Close</u>: close the window.



Scheduling a visit can also be done in the **Therapy Management** module; see Therapy Management

14 License



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