Open Hospital 1.14.2 - 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 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>.
- It allows enabled user to easily access the application **Logs** folder



1.2.2 Legend

In this document, the following conventions are used:

- When a text is written in bold and highlighted in grey like **Pharmacy** or **New** it indicates a function of the application and it is also called a "button". **Pharmacy** is a button.
- When a text is written in bold italics (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".





• 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 Browser The name of this window.												
Select an exam	Select an exam DATE PATIENT EXAM					RESULT							
	15/03/2021 19:41:32	Jeffreys Risa				3.1 Blood Slide (N	(alaria)	NEGATIVE					
All	-	15/03/2021 19:41:32	Jeffre	ys Risa					3.2 Blood Slide (C	THERS,	NEGATIVE		
	_	15/03/2021 14:35:46	Depu	y Darrell					7.3.3 GOT				<= 50 (NORMAL)
Date From: 27/04/2000		15/03/2021 14:35:46	Depu	ıy Darrell					7.3.4 ALT/GPT				> 50
		15/03/2021 14:35:26	Curti	s Courson					8.1 OCCULT BLOO	D			NEGATIVE
Date To: 04/05/2022		15/03/2021 14:35:09	Nieve	es Julietta					3.1 Blood Slide (M	(alaria)			NEGATIVE
	-	15/03/2021 14:35:09	Nieve	es Julietta					3.21 Trypanosom	iasis	Area where data a	re	NEGATIVE
Search		15/03/2021 14:35:09	Nieve	es Julietta					3.6 CSF WET PREF	P	displayed is called	the	NEGATIVE
		15/03/2021 12:32:17	Sara	Hucklingto	n				5.4 LEISMANIA		"Data table".		NEGATIVE
		15/03/2021 12:32:17	Sara	Hucklingto	n				7.4.1 CREATININA				1.4 - 2.5
Λ.		15/03/2021 12:16:50	Eddir	ngs Carmir	e				1.5 ESR				NORMAL
		13/03/2021 22:47:53	Gere	mia Dickin	son				2.1 Grouping				AB RH+
		13/03/2021 22:47:53	Gere	mia Dickin:	son				7.4.1 CREATININA				< 1.4 (NORMAL)
		13/03/2021 01:17:47	Kenty	/ Willis					3.1 Blood Slide (N	(alaria)	NEGATIVE		
		13/03/2021 01:17:47	Kenty Willis 4						4.6 OTHER C&S		NEGATIVE		
		13/03/2021 00:54:26	Bump	oers Ferdir				2.2 Comb's Test		NEGATIVE			
		13/03/2021 00:54:26	Bump	oers Ferdir				3.1 Blood Slide (N	(alaria)	NEGATIVE			
Area where you can		13/03/2021 00:50:42	Mary	Garringto	ו				URINALYSIS				Multiple results
apply search		23/11/2020 16:02:33	Quinl	an Coors					7.1 PROTEIN				NEGATIVE
critoria is called the		23/11/2020 16:02:33	Quinl	an Coors					7.2 SUGAR				NORMAL
		21/11/2020 22:40:40	Hobe	rt Kittelso	n				1.4 Film Comment	t	0		
Selection panel		21/11/2020 22:40:40	Hobe	rt Kittelso	1				1.6 Sickling Test		NEGATIVE		
		21/11/2020 22:40:40	Hobe	rt Kittelso				4.1 CULTURE AND	SENSITI	POSITIVE			
		21/11/2020 22:40:18	Janus	sz Lavera					1.4 Film Comment	t	0		
		21/11/2020 22:08:31	Vince	ent Arata					4.6 OTHER C&S		NEGATIVE		
		21/11/2020 22:08:31	Vince	ent Arata					5.4 LEISMANIA		NEGATIVE		
		21/11/2020 22:08:31	Vince	ent Arata					6.4 HEPATITIS				NEGATIVE
		21/11/2020 02:23:20	Genn	ia Susterlii	nd				6.4 HEPATITIS				NEGATIVE
		21/11/2020 02:23:20	Genn	ia Susterlii	nd				6.5 OTHERS E.G B	RUCELLA	A, RHEUMATOID FACTOR, V	WEIL FE	. NEGATIVE
	21/11/2020 01:52:02 Jest								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 1							10-55 (NORMAL)					
	21/11/2020 01:41:32 Shannan Matias 6.2 TPHA POSITIVE							POSITIVE					
		21/11/2020 01:41:18	Eddy	Rambin					7.4.1 CREATININA		C Aroo II	where we	u can chasse the function
		21/11/2020 01-/11-08	llazmi	ne Gwwn					13.1 Blood Slide (N	(alaria)	Area w	vnere yo	ou can choose the function
		New	Edit	Delet	e	Print Table	Print <u>L</u> abel	Close	to be ap	plied 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 the example below):

~		Pharm	aceutical Browser				- 0	8
TYPE	CODE	DESCRIPTION		PcsXPck	STOCK	CRIT. LEVEL	OUT OF STOCK	
Laboratory		4 Dimethyl Aminobenzaldelyde		0	0	0	2	-
Drugs		Acetazolamide 250mg Tab		0	0	0	~	_
Laboratory		Acetic Acid Glacial 1 ltr		0	0	0	V	_
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	V	
Drugs		Adrenaline 1mg/ml 1ml Amp		0	0	0	v	
Surgery		Air ring set 43x15cm, rubber with pump	Entry (line) is highlight	ed. 0	0	0	V	
Surgery		Airway Guedel Size 0		0	0	0	2	
Surgery		Airway Guedel Size 00		0	0	0	V	
Surgery		Airway Guedel Size 1		0	0	0	2	
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	~	
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	2	
Drugs		Amoxycillin /Clavulanate 375mg Tab		0	0	0	~	
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	2	
Drugs		Ampicillin 500mg Vial		0	650	0		
Chemical		Anti Serum A 10ml		0	0	0	2	-
Select type ALL	•	<u>N</u> ew <u>E</u> dit	Delete Export	<u>Stock</u> Stock	Card <u>O</u> rder	Expiring	A <u>M</u> C <u>C</u> los	se

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):

		OPD Out Patient Department											
1		Select a Ward	CODE	OPD NO.	WARD	DATE	PAT. ID	FULL NAME	SEX AGE	DISEASE	DISEASE TYPE	STATUS	
(Clicking on OPD in the	All Wards 👻											
	accesses the OPD Out	Select a Disease											
	Patient Department	All Types											
	window shown.												
он	×	All Diseases											
	Use dmin	Date From: 02/12/2022											
	V <u>o</u> pd	Date To: 02/12/2022											
	Pharmacy	Age From: 0											
	Admission/Rationt	Age To: 0											
	Admission/Patient	Select Sex											
	Laboratory	All Male Female											
	A <u>c</u> counting												
	Statistics	туре											
	Vaccines	● All O New O Re-Attendance											
a .	Weekshoot	Search											
VER	worksneet	Count: 0											
6	Reports												
3	<u>S</u> ettings												
NEW	<u>H</u> elp												
В	Logout												
	Fedore					<u>N</u> ew <u>E</u> o	lit <u>D</u> elet	e <u>C</u> lose					

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 **<u>O</u>PD** button or press "Alt + O" in the main *menu* to access the OPD function.

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

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
	Vaccines
AMATICI A Iterae	<u>W</u> orksheet
IN 20 THE TRACE	<u>R</u> eports
ITAL	<u>S</u> ettings
HOSP	<u>H</u> elp
ō	Logout

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										- 🗆 X
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										
Date From: 30/01/2023										
Date To: 30/01/2023										
Age From: 0										
Age To: 0										
Patient Type: All New Re-Attendance										
O My Patients All										
Search Reset										
Count: 0										
				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
- $\circ~{\bf Sex}:$ Select patients by sex: All / Male / Female
- $\circ~$ Date: "Date From" and "Date To" to select all visits occurring during the specified period
- 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 Pat	tient Department									_		_	- 0	×
Search by Co	do (proce ENTER)		CODE	OPD NO.	WARD	DATE	PAT. ID	FULL NAME	SEX	AGE	DISEASE	DISEASE TYPE	STATU	USER
Search by Co	de (press ENTER)		400	392	OPD	23/11/2020 16:00	470	Leddy Everette	M	41 Asthma		4 NON-COMMUNICABLE DISEAS	ES New	admin
Code	OPD No.	Pat. ID	356	348	OPD	03/11/2020 18:23	448	Jurgensen Fritz	M	Asthma		4 NON-COMMUNICABLE DISEAS	ES New	admin
			348	340	OPD	03/11/2020 18:15	443	Abboud Jeanene	F	Asthma		4 NON-COMMUNICABLE DISEAS	ES New	admin
			257	250	OPD	03/11/2020 16:51	246	Fredrickson Denna	M	1 Asthma		4 NON-COMMUNICABLE DISEAS	ES New	admin
Other Filters			207	200	OPD	03/11/2020 16:09	194	Scheff Benjamin	M	14 Asthma		4 NON-COMMUNICABLE DISEAS	ES New	admin
All Marada			168	161	OPD	03/11/2020 09:24	375	Nicolai Adan	M	76 Asthma		4 NON-COMMUNICABLE DISEAS	ES New	admin
All Warus			158	151	OPD	02/11/2020 09:14	365	Reardon Mora	F	2B Asthma		4 NON-COMMUNICABLE DISEAS	ES Re-Att.	admin
All Disease T	vnes	-	100	94	OPD	02/11/2020 20:54	168	Molly Rod	F	19 Asthma		4 NON-COMMUNICABLE DISEAS	ES Re-Att.	admin
			41	38	OPD	02/11/2020 19:45	108	Ivery Hyman	F	40 Asthma		4 NON-COMMUNICABLE DISEAS	ES Re-Att.	admin
Search Dise	ase:		22	20	OPD	02/11/2020 19:14	85	Threadgill Mack	F	ep Asthma		4 NON-COMMUNICABLE DISEAS	ES Re-Att.	admin
A athena			3	2	OPD	02/11/2020 16:57	51	Abramo Oliver	M	70 Asthma		A NON-COMMUNICABLE DISEAS	ES Re-Att.	admin
Astrima														
Anaemia		^							\rightarrow					
Animal/snak	e bite													
Anxiety diso	rders													
Asthma														
Benine neop	lasm"s (all type)													
Cancer of th	e breast													
Cancele and	other skin cancers													
Cardiac arro	et													
caruac arre	Ann To: 0													
	Mge to: 0													
Patient Type	e: 🖲 All 🔾 New 🤇	Re-Attendance												
	My Patients (I)	All												
	Search Res	et												
	0													
	Count: 11													
						New	Edit [elete <u>C</u> lose						

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 regard 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 regard 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	
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>Cancel</u>	

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

- **OK**: 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.

OH New OPD Re	gistrati	ion														-	×
				6	⊖ Re	-Atten	dance 🔾	New Attend	lance [Refe	rral 🔲 I	Referred To					
Attendance Date	e	30/01/2023	15	22:19	*	1	OPD) No. 1		2	War	d OPD	-	8	Notes & Sympton	ıs	 •
Search	3	tamie				Q,	Johanson	Tamie					-	2			
Disease Type		All Types											-				
Diagnosis						9							-				
Diagnosis n.2 (f	ull list)					9							-				
Diagnosis n.3 (f	ull list)					9							-				
LAST OPD	VISIT	on 03/11/2020 1	16:02 - Liv	ver cirrho	sis												
	Note	<none></none>				•			_								
Next visit da	te		15		•	Ward	OPD			7							
Patient Ope	ration	5															
Patient (cod	le: 487)															
First Name	Joha	nson												^			
Last Name	Tami	ie															
Address	Gulc	on St.															
City	Butte	Town															
Next of Kin		15.1															
Age	3y 7n	n 150															
Sex			O Male	Fem	ale												
														-			
																	_
					[OK	Anar	mnesis	Exami	nation	Car	ncel			<u></u>		-
					l	2.4			2								

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 (7) 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's 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's 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 **<u>P</u>harmacy** from the main menu provides access to the Pharmacy menu. From the Pharmacy menu, the following functions are available: **<u>P</u>harmaceuticals**, **Pharmaceuticals <u>Stock</u>**, and **Pharmaceuticals Stock <u>W</u>ard**.

×

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.

~		Pharmaceu	tical Browser				-	e 🙁
TYPE	CODE	DESCRIPTION		PcsXPck	STOCK	CRIT. LEVEL	OUT OF ST	госк
Laboratory		4 Dimethyl Aminobenzaldelyde			0 3	5		-
Drugs		Acetazolamide 250mg Tab			0 0	0	2	
Laboratory		Acetic Acid Glacial 1 ltr		1	0 0	0	2	
Laboratory		Aceton 99% 1ltr			0 0	0	2	
Drugs		Aciclovir cream			0 320	2		
Drugs		Acyclovir 200mg Tab		1	0 1,210	0		
Surgery		Adhesive Tape 2.5cm x 5m			0 20	0		
Surgery		Adhesive Tape 7.5cm x 5m			0 0	0	2	
Drugs		Adrenaline 1mg/ml 1ml Amp		1	0 0	0	2	
Surgery		Air ring set 43x15cm, rubber with pump			0 0	0	V	
Surgery		Airway Guedel Size 0			0 0	0	2	
Surgery		Airway Guedel Size 00			0 0	0	2	
Surgery		Airway Guedel Size 1			0 0	0	V	
Surgery		Airway Guedel Size 2			0 0	0	2	
Surgery		Airway Guedel Size 3			0 0	0	2	
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		1	0 0	0	2	
Drugs		Amoxycillin 125mg/5ml Powd. Susp 100ml			0 180	0		
Drugs		Amoxycillin 250mg Caps			0 56,080	0		
Drugs		Amphotericin B 50mg Vial		1	0 0	0	2	
Drugs		Ampicillin 500mg Vial			0 650	0		
Chemical		Anti Serum A 10ml			0 0	0	V	-
Select type ALL	-	<u>N</u> ew <u>E</u> dit <u>D</u> ele	te E <u>x</u> port	Stock Stoc	kCard Orde	r Ex <u>p</u> iring	AMC	<u>C</u> lose

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:

- **<u>O</u>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>Edit</u> button in the *Pharmaceutical Browser* window to access the *Edit Medical* window, shown below. All the data can be modified or changed.

он Edit Medical	×
Туре:	Drugs
Code:	44
Description:	Atropine 1mg/ml 1ml Amp
Pieces per Packet:	10
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 C	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 B E
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 **StockCard** button in the **Pharmaceutical Browser** window to show the history of the 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 type
- 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>S</u>tock** in the Pharmacy menu, shown below.

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

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

OH Stock Movement Browser															- [X C
Selection Panel	REF. N	DATE	TYPE	WARD)	QTY	CO PHARM	CEUTICAL	MED TYPE	LOT	PREP DATE	DUE DATE	ORIGIN	COST	TOTAL	USER
Pharmaceutical	Ref025	10/05/2024	4 1 Disch.	CHILDREN	NARD	100	105 Amoxycillin	250mg Caps	Drugs	Lot-001	10/05/2024	01/05/2026		25.00	2500.0	admin
Description	Ref024	10/05/202	4 1 Charg	e		5000	105 Amoxycillin	250mg Caps	Drugs	Lot-001	10/05/2024	01/05/2026	JMS P	25.00	125000.0	admin
All																
Туре																
All																
Movement																
Туре																
All																
Ward																
All																
Date																
From: 03/05/2024																
To: 10/05/2024																
Lot Preparation Date																
From:																
To:																
Lot Due Date																
From:																
To:																
Filter Reset Keep																
				T	otal Qty:	N/A						Total:	UGX	122,50		
			C <u>h</u> arge	Discha <u>r</u> ge	Delete		Export to Excel	Stoc <u>k</u> Car	d Stoci	(<u>L</u> edger	Close					



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

Furthermore, a search function (<u>Filter</u>) is available using the **Selection panel** on the left of the window.

4.2.2.1 Search Pharmaceuticals Stock Movements (Filter)

он Stock Movement	Browser
Selection Panel —	
Pharmaceutical -	
Descr	ription
All	-
Ту	pe
All	-
Movement	
Ту	pe
All	-
Wa	ard
All	-
Da	ite
From:	03/05/2024
To:	10/05/2024 🛅
Lot Preparation Da	ate
From:	15
То:	15
Lot Due Date	
From:	15
To:	15
<u>F</u> ilter Re	ese <u>t</u> Keep

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

- how many boxes of pharmaceuticals 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 the 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, or Drug, 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.

By pressing the **Reset** button, all criteria reset to default values.

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:

~		SI	tock Mo	vement				8
Date:	09/05/2022	+		Refere	ence No.:			
Charge Type:	Charge 💌							
Supplier:	•							
	Туре а	code or a	descri	ption and	press ENTER	2		
CODE	DESCRIPTION	QTY/PAC	QTY	UNIT/PACK	TOTAL LOT NO.	EXPIRING	COST	TOTAL
		<u>D</u> elete	<u>S</u> av	re <u>C</u> an	cel			

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				8
?	Use an existing lot?				
	LOT ID	PREPARATIO	DUE DATE	QUANTITY	COST
	-41119164	01/04/2019	30/03/2025	69310	
	I				
Selected Lot 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			
	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	8
?	Unit cost	
	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 **Discha<u>rg</u>e** button in the **Stock Movement Browser** window. The **Stock Movement** window is shown:

~		Stock Movement	ଁ 😣 ି		
Date	09/05/2022	Reference No.			
Discharge Type	Discharge 💌				
Destination	•				
	Type a code of	r a description and press ENTER			
CODE	DESCRIPTION	UNIT/PACK QTY UNIT/PACK TOTAL LOT NO.	EXPIRING		
Delete Save Cancel					

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	
	Yes <u>N</u> o	

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.

~	Quantity Code: 314		
?	Gloves Surgical Sterile 6.5 Lying in stock: 1000.0		
	OK Cancel		

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

~	Lot Information				8
?	Select a lot				
	LOT ID	PREPARATION D	DUE DATE	QUANTITY	
	1190/55/4291	15/03/2021	15/03/2021	1000	-
OK Cancel					

Select the existing lot and click **O**K 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.

4.2.2.4 Delete Last Stock Movement (Delete)

In Pharmaceutical Stock it is not possible to change the past and all operations need to be done in consecutive order. If a mistake concerns a movement in the past (for example, the wrong quantity of a pharmaceutical is inserted in charge), then use a new opposite movement to correct the mistake (in the example, use a discharge movement to undo the unwanted change).

Nevertheless, the admin can enable/disable the **<u>D</u>elete** button that allows the enabled user do delete only the last movement, and helps quickly undoing mistakes.

To delete the last movement, select first the row that you want to delete and press the **Delete** button in the *Stock Movement Browser* window. Only one row is allowed to delete at a time.

If it is not the last movement the following *Error* message is shown:



But if the row selected is the last movement this *Question* message is presented:



Click $\underline{\mathbf{Y}es}$ to confirm the deletion of the last movement, otherwise click $\underline{\mathbf{N}o}$ to cancel the operation. After clicking the $\underline{\mathbf{Y}es}$ button, the system checks if the product involved in the selected movement has not been used itself in the *Pharmaceuticals Stock* $\underline{W}ard$ (see <u>Pharmaceuticals Stock</u> Ward in this document).

If the product has been already used in a Ward, then the *Error* message is shown.



Otherwise the selected movement is deleted and the *Success* window is shown:




This button can be enabled/disabled to allow/not allow movements deletion. 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	
Pł	narmaceutical Stock <u>W</u> ar	rd

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

он	Ward Pharmacy _	п×
<select a="" ward=""> 💌 WARD</select>	Date From: 20/12/2022 🛅 Date To: 20/12/2022	15
	<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:

Mard Pharmacy		- 🗆 X
FEMALE WARD	Date From: 09/02/2024	e To: 09/02/2024
Medical	Outcomes Incomings Drugs	
All Types 💌	Double click to show lot details	
	MEDICAL QUANTITY UNITS	
	Amphotericin B 50mg Vial 100.0 pieces	<u>R</u> ectify
	Acyclovir 200mg Tab 100.0 pieces	Rectify
	Amoxycillin 250mg Caps 1000.0 pieces	<u>R</u> ectify
Age	cotton Wool 500G 20.0 pieces	<u>R</u> ectify
	Mosquito Net Impregnated Large 20.0 pieces	<u>R</u> ectify
Age From: 0 Age To: 0	X-Ray Fixer 3.3kg for 22.5 Ltr 10.0 pieces	<u>R</u> ectify
Sev	Paracetamol 500 MG 210.0 pieces	Rectify
● All ○ Male ○ Female		
Weight		
From 0 To 0		
<u>F</u> ilter Re <u>s</u> et		
Count: 0		
<u>N</u> ew <u>Rectify</u> Reg	ort <u>Excel</u> <u>D</u> elete Stoc <u>k</u> Card Stock <u>L</u> edger	<u>C</u> lose

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.
- **Excel**: export the data in a format to import into Excel.

- **<u>D</u>elete**: delete the last movement.
- **StockCard**: show the history of the movement for a certain pharmaceutical (can be directly selected by the list otherwise will be requested).
- **Stock Ledger**: show the history of the 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	118 -	120.0
Reason	Reducing quantity to 118 (scrapping 2 tablets)	
	<u>O</u> K <u>C</u> ancel	

Click **<u>O</u>K** to save the rectification or **<u>C</u>ancel** to abort the change.

4.3.2.2 Search War	d Pharmacy	Movements	(<u>F</u> ilter)
--------------------	------------	-----------	-------------------

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 (<u>N</u>ew)

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

он New / Edit							×
O Patient						Select P	atient 💰
🔘 Internal use 📗	ITERN	AL USE					
Another Ward	MATE	RNITY WARD				•	
parac		Paracetamo	I 500 MG			-	🐈 <u>M</u> edical
Paracatamal 500 M(<u>,</u>	MEDICAL			10.0	QUANTITY	LOT NO.
	-				10.0		1010
							Remove <u>I</u> tem
			<u>о</u> к	<u>C</u> ancel			

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:



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>O</u>K 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.

4.3.2.5 Delete the Last Stock Movement in a Ward (Delete)

In a pharmaceutical stock ward, it is possible to discharge medicals to **patient**, **internal use** or **another ward**. If a mistake is made during the discharge, it is possible to delete it in order to correct the stock of the ward and resume the action.

The Administrator can enable or disable the **Delete** button that allows the deletion of the last movement. This aids in quickly undoing mistakes.

To delete the last movement, select first the row that you want to delete and press the Delete button in the Stock Movement Browser window. Only one row is allowed to delete at a time.

If the selection is not the last movement the following error message dialog is shown:



If the row selected is the last movement then this *Question* message is presented:



Click $\underline{\mathbf{Y}es}$ to confirm the deletion of the last movement, otherwise click $\underline{\mathbf{No}}$ to cancel the operation. After clicking the $\underline{\mathbf{Y}es}$ button, if the movement discharges to another ward, the system checks if the product involved in the selected movement has not been used in the destination ward. If not, then the movement is deleted, otherwise the deletion is denied.

If the product has been used in the destination ward, then the *Error* message is shown:



Otherwise the selected movement is deleted and the *Success* window is shown:





This button can be enabled or disabled to control movements deletions. Ask the Administrator or check the Administrator's Guide for more information.

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
	Vaccines
AMATICI MA TITAF	<u>W</u> orksheet
OCNI STRE TROP	<u>R</u> eports
ATAL	<u>S</u> ettings
DPEN	<u>H</u> elp
ō	Logout

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 recorded in the last week.

~		Laboratory Browser		- 🔇
Select an exam	DATE	PATIENT	EXAM	RESULT
	15/03/2021 19:41	Jeffreys Risa	3.1 Blood Slide (Malaria)	NEGATIVE
All	15/03/2021 19:41	Jeffreys Risa	3.2 Blood Slide (OTHERS, 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 BLOOD	NEGATIVE
Date To: 12/09/2022	15/03/2021 14:35	Nieves Julietta	3.1 Blood Slide (Malaria)	NEGATIVE
	15/03/2021 14:35	Nieves Julietta	3.21 Trypanosomiasis	NEGATIVE
Search	15/03/2021 14:35	Nieves Julietta	3.6 CSF WET PREP	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 (Malaria)	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 (Malaria)	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	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	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 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	< 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 Gwyn	3.1 Blood Slide (Malaria)	+++
		<u>N</u> ew <u>E</u> dit <u>D</u> elete <u>P</u> rint Table	Print Label Close	

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.

 		Laboratory Browser		- 🛛
Select an exam	DATE	PATIENT	EXAM	RESULT
21/1	11/2020 22:40 Ho	obert Kittelson	1.4 Film Comment	0
All = 21/1	11/2020 22:40 Ho	obert Kittelson	1.6 Sickling Test	NEGATIVE
21/1	11/2020 22:40 Ho	obert Kittelson	4.1 CULTURE AND SENSITIVITY (C&S) FOR HAEMOPHILUS INF	POSITIVE
Date From: 21/11/2020 📅 21/1	11/2020 22:40 Ja	nusz Lavera	1.4 Film Comment	0
21/1	11/2020 22:08 Vi	ncent Arata	4.6 OTHER C&S	NEGATIVE
Date To: 21/11/2020 🛅 21/1	11/2020 22:08 Vi	ncent Arata	5.4 LEISMANIA	NEGATIVE
21/1	11/2020 22:08 Vi	ncent Arata	6.4 HEPATITIS	NEGATIVE
<u>Search</u> 21/1	11/2020 02:23 Ge	enna Susterlind	6.4 HEPATITIS	NEGATIVE
21/1	11/2020 02:23 Ge	enna Susterlind	6.5 OTHERS E.G BRUCELLA, RHEUMATOID FACTOR, WEIL FELIX	NEGATIVE
21/1	11/2020 01:52 Je	stine Dacruz	5.5 ZN	NEGATIVE
21/1	11/2020 01:47 St	anton Durrah	7.4.1 CREATININA	< 1.4 (NORMAL)
21/1	11/2020 01:47 St	anton Durrah	7.4.2 UREA	10-55 (NORMAL)
		<u>N</u> ew <u>Edit</u> <u>D</u> elete <u>P</u> rint Table	Print Label <u>C</u> lose	

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
 - 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 5:40 + Material
Exam	Select an exam
Patient	In Select a patient
Name	Age Sex (M/F)
Note	
Result —	
L	
	<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 15 8:27	+ Material Unde	fined 💌
Date	30/06/2022 🛅 16:48 + Material	-	Exam	URINALYSIS		-
Exam	1.1 HB	-	🔲 In	P. Code 525	Mary Garrington	-
Patient	In Select a patient	-	Patient	s Data		
Name	Age Sex (M/F)		Name	Mary Garrington	Age 0	Sex (M/F) F
Note			Note			
		-		J		
Result -			Result			
	>=12 (NORMAL)			BILIRUBIN	● P ○ N	
	>=12 (NORMAL)			HCG	○ P ● N	
	6 - 12			PROTEIN	○ P ● N	
				SEDIMENTS	⊖ P ● N	
				SUGAR	• P • N	
				UROBILINOGEN	⊖ P ® N	
				ок	Print Cancel	
	<u>O</u> K <u>P</u> rint <u>C</u> ancel					
~	New Laboratory Exam	- 🛛				
Date	29/06/2022 🛅 16:53 + Material	-				
Exam	1.1 HB (Procedure 3)	-				
Patient	In Select a patient	-				
Name	Age Sex (M/F)					
Note						
		-				
Result –						
	11.2 gal					



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)
	<u>O</u> K <u>P</u> rint <u>C</u> ancel

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 – Q								
Select an exam	DATE	PATIENT	EXAM	RESULT					
	15/03/2021 19:41:32	Jeffreys Risa	3.1 Blood Slide (Malaria)	NEGATIVE					
All	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	15/03/2021 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	15/03/2021 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	Quinlan 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	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	NEGATIVE					
	21/11/2020 01-41-08	llazmine Guun	13.1 Blood Slide (Malaria)	1444 (C)					
		<u>N</u> ew <u>E</u> dit <u>D</u> elete <u>P</u> rint Table	Print Label Close						

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, 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 which 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 insertions 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	- 🗆 🚫
Date	23/07/2021 15 16:11 +		
Patient		💐 <u>F</u> ind Patient 🔹	OPD OIP
	EXAM	RESULT	🕂 Exam 🛛 😫 Remove
1.1 HB		>=12 (NORMAL)	Material
1.2 WBC Cou	nt	4000 - 7000 (NORMAL)	Undefined
URINALYSIS		Multiple results	ondenned
			Result
			HCG
			PROTEIN
Note			
	<u>0</u> I	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. The 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 is 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).

он				Patien	t Bills Manag	ement				-	×
	admin 🔻	Today Date Fr	om: 09/11/2021	Date To: 09	9/11/2021	15 December	▼ <u>+</u> 2022 <u>+</u>			\$	
Bills	Pending	Closed									
USER	ID	DATE	PAT. ID	P/	ATIENT		AMOUNT	LAST PAYMENT	STATUS	BALANCE	IN/OUT
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 Philo	mena Redondo			102.0	09/11/2021 17:44	0	72.0	
admin	45	09/11/2021 17:22	537 Wally	/ Simpsons			60.0	09/11/2021 17:22	C	0.0	
admin	44	09/11/2021 15:40	535 Kenn	iy Flanagan			151.0	09/11/2021 15:41	C	0.0	
admin	43	09/11/2021 15:39	534 Mirta	Veluma			80.0	09/11/2021 15:39	0	30.0	
Paid To Paid Pe	riod: UGX	3	71 Not Paid:	UGX	102	<u>N</u> ew Bill	Edit Bill	Delete Bill Rec	ei <u>p</u> t !	Report (lose
admin T	oday:	5	0 admin Period	:	371						

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 6.2.1.9 Save Function (<u>Save</u>))

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	lew 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, the **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:

~	Patier	nt S	election		0
Search Patie	nt New Patien	t			
CODE]		
CODE	INAME Jeanna Biskember	4			
519		- ^		Name:	
517	Maria Nieko	-11		Age:	
516	Genna Susterlind			Sex:	
515	Alvaro Bobertson	-			
514	Mario Rossi	-11		TOB	
513	Makenzie Everton	-11		100.	
512	Millman Enriquetta	-11	Tax Number ID		
511	Henderson Alba	11	Tax Number 1D		
510	Bacuba Scottie	11			
509	Ventier Asia	11	Address		City
508	De Koenig Melissa		Address		city
507	Westermann Fred				
506	Zabel John		Parents		
505	Curtney Gina				
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	_	-		
	llohanson 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	lew Patien	t Bill	×					
D	ate	10/10/2022 🛅 18:18	•	Schange Patient	*	admin		
P	atient	Sara Hucklington		List Ba	asic 💌	OPD		
	TOTAL		UGX		10	🕂 Medical		
		ITEM	QTY	AMOUNT				
	Cyclopho	sphamide 500mg Vial	1	0.0				
	5 days of hospitalization		1	10.0		🕂 Exam		
						🕂 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	22 18:20		7.0		🕂 <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		3	🖉 <u>C</u> lose		

last two the quantity is not required (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 🛛 😣								
K Choose a description:									
Number of days of hospitalization									
	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.

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 the <u>Save function</u> 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>R</u>efund** 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 selecting 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
Caesaria	in section	1	80.0	Exam
Suture Si	Inide 250 mg rab	2	12.0	
2.1 Group	ping	1	10.0	TOther
				Remove <u>I</u> tem
TO PAY		UGX	102	Payment
09/11/20	21 17:44		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	Bill: 46				×
Date	09/11/2021 15 17:44	•	💩 C <u>h</u> ange Patient	*	admin
Patient	Philomena Redondo		List B	asic 🔻	OPD
TOTAL		UGX		102	Hedical
	ITEM	QTY	AMOUNT		
Caesaria	n section	1	80.0		
Acetazola	mide 250mg Tab	2	0.0		🕆 Exam
Suture Si	lk (1) S595	2	12.0		🕂 Other
2.1 Group	oing	1	10.0		
					Kemove <u>I</u> tem
TO PAY		UGX		102	🕂 Pa <u>v</u> ment
09/11/202	21 17:44		110.0		
09/11/202	21 17:44		-80.0		
					E Payment Receipt
					🗱 Remo <u>v</u> e Payment
					🚽 Give Change
					💾 <u>S</u> ave
			·		✓ P <u>a</u> id
BALANCE		UGX		72	O Close

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 15 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	n section	1	80.0	
Acetazola Suturo Si	IMIDE 250Mg Tab	2	12.0	
2.1 Grout	bina	1	10.0	🕂 O <u>t</u> her
				+ C <u>u</u> stom
				Remove Item
TO PAY		UGX	102	🕂 Payment
09/11/202	21 17:44		110.0	refund
09/11/202	21 17:44		-80.0	Payment Receipt
				Remo <u>v</u> e Payment
				🚽 Give Change
				Save
				✓ P <u>a</u> id
BALANCE		UGX	72	O Close

Case 2)

Questio	n X
	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	n section	1	80.0	
Acetazola	mide 250mg Tab	2	0.0	<u> </u>
2 1 Grour	ik (1) 8595	2	12.0	🕂 O <u>t</u> her
2.1 0100	, ing		10.0	🕂 C <u>u</u> stom
				Remove Item
TO PAY		UGX	102	Payment
09/11/202	21 17:44		110.0	+ Refund
09/11/202	21 17:44		-80.0	
				Payment Receipt
				Remo <u>v</u> e Payment
				🚽 Give Change
				Save
			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	Edit Patient 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	- Operation		
Caesaria	n section	1	80.0			
Acetazola	imide 250mg Tab	2	0.0	<u><u><u></u></u><u>E</u>xam</u>		
Suture Si	IK (1) S595	2	12.0	🛉 🕂 Other		
2.1 0100	Jing		10.0	+ Custom		
				a Remove Item		
TO PAY		UGX	102	Payment		
09/11/202	21 17:44		110.0	Refund		
09/11/202	21 17:44		-80.0	Payment Receipt		
				Remove Payment		
				🚽 <u>G</u> ive Change		
				E Save		
			1	✓ P <u>a</u> id		
BALANCE	<u> </u>	UGX	72	O Close		

Case 3)

Questic	on X
	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
Caesaria	an section	1	80.0	
Acetazola	amide 250mg Tab	2	0.0	<u> </u>
2 1 Grou	ning	2	12.0	🕂 Other
2.1 0100	ping		10.0	🕂 C <u>u</u> stom
				Remove Item
		1		
TO PAY		UGX	102	Payment
09/11/20	21 17:44		110.0	Refund
09/11/20	21 17:44		-80.0	Payment Receipt
				Remo <u>v</u> e Payment
				🚽 <u>G</u> ive Change
				Save
				√ P <u>a</u> id
BALANC	E	UGX	[72]	Ose <u>C</u> lose

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

Edit Patient	Bill: 46				×
Date	09/11/2021 15 17:44	•	Schange Patient	*	admin
Patient	Philomena Redondo		List Ba	isic 💌	FEMALE WARD
TOTAL		UGX		102	🕂 Medical
	ITEM	QTY	AMOUNT		+ Operation
Caesaria	n section	1	80.0		
Acetazola	mide 250mg Tab	2	0.0		The Exam
Suture Si	ik (1) S595	2	12.0		+ O <u>t</u> her
2.1 0100	ning	1	10.0	_	🕂 C <u>u</u> stom
					Remove Item
		1			
TO PAY		UGX		102	🐈 Payment
09/11/202	21 17:44		110.0		Refund
09/11/202	21 17:44		-80.0		Payment Receipt
					Remo <u>v</u> e Payment
					🚽 <u>G</u> ive Change
					💾 <u>S</u> ave
					√ P <u>a</u> id
BALANCE	<u>.</u>	UGX		72	🖉 <u>C</u> lose

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

OH Patient Bills Management _ D X										
	admin 🔻	<u>T</u> oday Date From	n: 09/11/2	021 🛅 Date To: 09/11/2	021 🛅 December	▼ [^] → 2022 [^] →]		ی 🔹	
Bills	Pending	Closed								
USER	ID	DATE	PAT. ID	PATIENT	-	AMOUNT	LAST PAYMENT	STATUS	BALANCE	IN/OUT
admin	47	09/11/2021 18:29	540	Redy Villen		80.0	09/11/2021 18:30) C	0.	
admin	46	09/11/2021 17:44	539	Philomena Redondo		102.0	09/11/2021 17:44	1 0	72.	
admin	45	09/11/2021 17:22	537	Wally Simpsons		60.0	09/11/2021 17:22	2 C	0.	
admin	44	09/11/2021 15:40	535	Kenny Flanagan		151.0	09/11/2021 15:41	C	0.	
admin	43	09/11/2021 15:39	534	Mirta Veluma		80.0	09/11/2021 15:39	9 0	30.	
Daid To	day. UCY		Net Paid	• 16Y	0					
Paid To Paid Pa	day: UGX	(Not Paid	UGX	102 <u>N</u> ew Bill	Edit Bill	Delete Bill R	ecei <u>p</u> t	Report	<u>C</u> lose
admin 1	Inday:	3/1		ariod:	371					

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						
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:

		」 □	asperViewer					- * 😣
	St. Luke							_
	P.O. BOX 85 - NEBBI - ANGAL angal@ucmb.ug.co. +256 0472621076 Periodical Incomes/Billed and Receivables Report(with pending							
Perio								
		r	eport fro	om 20/11	L/2020 TC	D 20/11/	2020	=
Bill 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		
			Page 1 of	1				



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:
он				Pati	ient Bills Mana	gement				-	. 🗆 ×
	admin 🔻	<u>T</u> oday Date Fro	om: 09/11/2	2021 🛅 Date To:	09/11/2021	15 December	× 2022 ×				
Bills	Pending	Closed									
USER	ID	DATE	PAT. ID		PATIENT		AMOUNT	LAST PAYMENT	STATUS	BALANCE	IN/OUT
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	
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	C	0.0	
admin	43	09/11/2021 15:39	534	Mirta Veluma			80.0	09/11/2021 15:39	0	30.0	
Paid To	day: UGX	The application show thom panel the Incon the the amounts PAID AID for TODAY with PERIOD select	vs in the nes Table and NOT n the time ed.	UGX	0	The In shows ti for TOI the P sel	comes Table he amount PAIE DAY and within ERIOD for the ected user.				
Paid Pe	riod: UGX	3	71 Not Paic	: UGX	102	New Bill	Fait Rill	Jelete Bill Rec	ei <u>p</u> t <u>i</u>		lose
admin T	Today:		0 admin P	eriod:	371						

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:

он	Patient Bills Management				_ = ×
	admin 🖵 Ioday Date From: 09/11/2021 🛅 Date To: 09/11/2021 🛅 December	2022	-	3	6
Bills	Pending Closed				
USER	ID DATE PAT. ID PATIENT	AMOUNT	LAST PAYMENT	STATUS BALAN	CE IN/OUT
admin	47 0 021 18:29 540 Redy Villen	80.0	09/11/2021 18:30	С	0.0
admin	46 09/A 17:44 539 Philomena Redondo	102.0	09/11/2021 17:44	0	/2.0
admin	43 09/11/2 0 535 Kenny Flanagan	151.0	09/11/2021 17:22		0.0
admin	43 09/11/20 534 Mirta Veluma	80.0	09/11/2021 15:39	0	30.0
Paid Too	Enabled users can filter the Incomes Table by the users involved in some payment.	Edit Bill	Delete Bill Perc	aint	Clase
Paid Per	iod: UGX 371 Not Paid: UGX 102 New Bill	<u>E</u> dit Bill	Delete Bill Reco	ei <u>p</u> t <u>R</u> eport	<u>C</u> lose
admin T	oday: 0 admin Period: 371				

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
	<u>O</u> PD
	<u>P</u> harmacy
	<u>L</u> aboratory
	<u>A</u> dmission/Patient
	Accounting
	S <u>t</u> atistics
	Vaccines
KMATICI A TITAE	<u>W</u> orksheet
TEGN	<u>R</u> eports
TAL	<u>S</u> ettings
OPEN	<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			🛛
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						
Search						
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).

~			Patient Vaccine Browser						
Select a vaccine type	DATE	SEX	AGE	VACCINE	VACCINE TYPE				
Select a vaccine type	15/03/2021	М	1	POLIO 1 C	Child				
	15/03/2021	F	37	TT VACCINE DOSE 2	Pregnant				
Аптуре	15/03/2021	М	35	TT VACCINE DOSE 3	Pregnant				
	15/03/2021	M	54	TT VACCINE DOSE 4	Pregnant				
Select a vaccine	23/11/2020	M	57	POLIO 3 C	Child				
	23/11/2020	F	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	F	51	POLIO 2 C	Child				
	21/11/2020	F	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	M	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 Female	20/11/2020	F	42	TT VACCINE DOSE 2	Pregnant				
	20/11/2020	F	6	MEASLES	Child				
Search	20/11/2020	M	16	BCG	Child				
	20/11/2020	F	79	TT VACCINE DOSE 5	No pregnant				
Count: 26	20/11/2020	М	33	TT VACCINE DOSE 4	Pregnant				
	20/11/2020	M	13	BCG	Child				
	20/11/2020	М	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	\otimes
Date	13/04/2022 T Progressive 27	
Search Patient	Select a patient	•
Vaccine Type	All Type	-
Vaccine	All vaccines	•
Patient's Data		
Name	Age Sex (M/F)	
	OK Cancel	

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 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.
- **Cancel**: 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 Patien	: Vaccine
Date	21/11/2020	Progressive 16
Search Patient		Shultz Ardis
Vaccine Type	Child	-
Vaccine	POLIO 2 C	•
Patient's Data-		
Name Shul	tz Ardis	Age 51 Sex (M/F) F
	<u>0</u> K	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:

- OK: 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

~		Patient Vac	cine Browser			8
	DATE	PATIENT	SEX	AGE	VACCINE	VACCINE TYPE
Select a vaccine type	15/03/2021	Vessin Jordan	M	1	POLIO 1 C	Child
	15/03/2021	Genina Justterin	F	37	TT VACCINE DOSE 2	Pregnant
Аптуре	15/03/2021	Anthon Geremy	M	35	TT VACCINE DOSE 3	Pregnant
	15/03/2021	Marcus Kellop	M	54	TT VACCINE DOSE 4	Pregnant
Select a vaccine	23/11/2020	Heard Elna	M	57	POLIO 3 C	Child
	23/11/2020	Orbison An	F	50	TT VACCINE DOSE 2	Pregnant
All vaccines 🔹	23/11/2020	Horwitz Stuart	M	14	MEASLES	Child
	22/11/2020	Rochester Lenny	M	2	POLIO 3 C	Child
Data From: 19/07/2001	21/11/2020	Lounsbury Valda	F	6	POLIO 1 C	Child
Date From. 19/07/2001	21/11/2020	Sargeant Milda	M	2	MEASLES	Child
Date To: 26/07/2021	21/11/2020	Shultz Ardis	F	51	POLIO 2 C	Child
	21/11/2020	Madaline Mincks	F	52	TT VACCINE DOSE 3	Pregnant
Age From: 0	20/11/2020	Ciancio Michale	F	29	TT VACCINE DOSE 2	Pregnant
	20/11/2020	Batman Camelia	F	1	DPT 2 - HepB + Hib 1	Child
Age To: 0	20/11/2020	Ali Norman	M	41	DPT 3 - HepB + Hib 1	Child
	20/11/2020	Erdmann Dustin	F	2	POLIO 1 C	Child
Select Sex	20/11/2020	Nerina Vernell	F	2	DPT 2 - HepB + Hib 1	Child
	20/11/2020	Jeana Bennett	F	41	DPT 3 - HepB + Hib 1	Child
🖲 All 🔘 Male 🕓 Female	20/11/2020	Saucedo Hortense	F	42	TT VACCINE DOSE 2	Pregnant
	20/11/2020	Deschamp Shonda	F	6	MEASLES	Child
Search	20/11/2020	Andrepont Golden	M	16	BCG	Child
	20/11/2020	Veloz Su	F	79	TT VACCINE DOSE 5	No pregnant
Count: 26	20/11/2020	Abdul Burton	M	33	TT VACCINE DOSE 4	Pregnant
	20/11/2020	Mcsherry Mortimer	M	13	BCG	Child
	20/11/2020	Merrihew Pamila	M	35	POLIO 3 C	Child
	19/11/2020	Mario Rossi	M	30	TT VACCINE DOSE 3	No pregnant
		<u>N</u> ew <u>E</u> dit	<u>D</u> elete	<u>C</u> lose		

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
	OPD
	<u>P</u> harmacy
	<u>L</u> aboratory
	<u>Admission/Patient</u>
	Accounting
	S <u>t</u> atistics
	Vaccines
RMATICI A TUTAR	<u>W</u> orksheet
INDU TRAN	<u>R</u> eports
TVT	<u>S</u> ettings
HOSPI	<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** with all of the patients currently present in the system.

он		Pat	ient Browser			_ = ×
	CODE	NAME	AGE	SEX	CITY / ADDRESS / TELEPHONE / NOTE	WARD
Admission Status	553	Yellen Unison	25y 4m 0d	F	Tuscin - Maddy rd. 90 - + 39	FEMALE WARD
All	552	Troy Daniels	45y 4m 0d	м	Kroster - Joysan avenu 27 - + 33143143431	2
	551	Anna Porttison	13y 4m 0d	F	Roty - Road Village st. 1 - +11.4322121	
Ward	550	Loredana Worthy	51y 10m 1	F	Misty city - Portland way 4 - +551354224	
CHILDREN WARD	549	Kerry Johnson	2y 6m 6d	м	Madison Town - Local way 27/2 - +2145245253	
FEMALE WARD	548	Mary Parway	73y 3m 28d	F	Verink - Marins Place 86/b - +39	
	547	John Mastiry	55y 4m 1d	М	Keiring - Korty Road It. 55 - +144542245	
MALE WARD	546	Jennifer Florence	5y 3m 29d	F	Johnson - Sesame st. 26/2 - +2245423234	
MATERNITY WARD	545	Kenny Gurion	41y 4m 2d	M	Resping - Wayland town N 45 - + 442315435425	
Count: 501	544	Rosa Ursily	21y 4m 21d	F	Maryint - Westington st. N. 45 - +39	
	543	Jeremy Keenan	47y 3m 25d	M	Gherson - Giant Plaza 24 - + 39213221312	
Age	542	Jeff Buskey	22y 1m 13d	м	Kernigan - Ruster Street 27 - +851344333	MALE WARD
From: To:	541	Philomena Jenkins	38y 11m 5d	F	Wellington - Western park N. 23 - +72145462545	
	540	Redy Villen	44y 3m 23d	F	Bloomingdale - Willer road 81 - + 393134341	FEMALE WARD
Sex	539	Philomena Redondo	40y 10m 7d	F	Muoni - Westfiled district - +180287435746545	FEMALE WARD
	538	Veronica Erini	3y 2m 21d	F	Uroha - New place 1 - +2154215434314	
All	537	Wally Simpsons	47y 0m 29d	M	New Village - Remsy Av. 1 - +394331112313	
	536	Geofrey Adenilson	53y 4m 22d	M	Juskey - Jefferson lane 258 - +1443521111	
	535	Kenny Flanagan	57y 0m 3d	м	Wally - First Avn. 762 - +123451354	
	534	Mirta Veluma	42y 0m 29d	F	Alimbu - Ambalony way - + 39432313123	
	533	Jennifer Stantson	27y 0m 21d	F	Madison - Fersy Plaza 1 - + 39	FEMALE WARD
	532	Kevin Aramburu	44y 7m 3d	M	Medington - St. Regents Road 45 - +21.112431545	
	531	Maximilian Huntis	56y 6m 5d	м	Restiville - Wilson road 51 - +2-23131312	
	530	Jeanina Smith	25y 11m 1	F	Springfield - Flanders Rd - +12443111	
	529	Sara Hucklington	3y 3m 6d	F	Kulele - Long Road 1 - +39	
	528	Kenty Willis	16y 10m 1	F	Jikney - Furja Street 81 - +3914413	
Search Key	527	Marcus Kellop	55y 3m 20d	м	Mirly - Fullister Pl. 45/b - +396153134	
Search Rey	526	Genina Justterin	38y 5m 21d	F	Uribe - Ghoulam Rd 231 - +393452432	
	525	Mary Garrington	2y 9m 15d	F	Kendring - Ganston - +393413231	
	524	Geremia Dickinson	69y 9m 29d	м	Kellog - Springfiled - + 396131211	•
<u>N</u> ew <u>E</u> dit <u>D</u> elete <u>A</u> dmission	Ana <u>m</u> nesis	Examination <u>O</u> PD	Laborato	У	<u>B</u> ill Da <u>t</u> a <u>Imaging</u> Clinical <u>Sheet</u> T <u>h</u> erapy Me	rge <u>C</u> lose



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.
- Anamnesis: manage the medical history, case history, or anamnesis of a patient.
- **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 the 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.

он			Patient Browse	r						_ = ×
	CODE	NAME	AGE	SEX		CITY / ADDF	ESS / TELEPHONE / N	OTE		WARD
Admission Status	488	Isabelle Glennis	8y 9m 16	d F	Grove - Downers	Rd south - +341	23443			
All	317	Isaiah Isabelle	75y 1m 0	d M	Gary Town - Cart	ersville district 5	- +45211111			
Ward										
FEMALE WARD										
MALE WARD										
MATERNITY WARD										
Count: 2										
Age										
From										
Sex										
Search Key										
isabe										
New Edit Delete Admission	Anamnesis	Examination	OPD Laborat	ory	Bill Data	Imaging	Clinical Sheet	Therapy	Merge	Close
				-		- 3				

6

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:

он			Patient Brows	er						_ = ×
Admission Status	CODE	NAME	AGE	SEX		CITY / ADDF	RESS / TELEPHONE / N	OTE		WARD
Ward										
CHILDREN WARD										
FEMALE WARD										
MALE WARD										
MATERNITY WARD										
Count: 0										
Date Administra Data *										
Admission Date *										
From: 15 To: 15										
Discharge Date										
From: To:										
Age										
From: To:										
Sex										
All										
Search Key										
New Edit Delete Admission	Ana <u>m</u> nesis	Examination	<u>O</u> PD <u>L</u> abor	atory <u>B</u> ill	Da <u>t</u> a	Imaging	Clinical <u>Sheet</u>	T <u>h</u> erapy	Merge	<u>C</u> lose

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			Patie	nt Browser							_ 🗆 ×
	CODE	NAME		AGE	SEX		CITY / ADD	RESS / TELEPHONE / N	IOTE		WARD
Admission Status	488	Isabelle Glennis	8	By 9m 16d	F	Grove - Downers R	d south - +3412	3443			
All	317	Isaiah Isabelle		75y 1m 0d	M	Gary Town - Carter	sville district 5 -	+45211111			
Ward											
CHILDREN WARD											
FEMALE WARD											
MALE WARD											
MATERNITY WARD											
Count: 2											
Date											
Admission Date *											
From: To:											
Discharge Date											
From: III To: III											
Age											
From: To:											
Sex											
All											
Search Key											
isabe 🔍											
<u>N</u> ew <u>E</u> dit <u>D</u> elete <u>A</u> dmission	Ana <u>m</u> nesis	Examination	<u>O</u> PD	Laborato	ry	<u>B</u> ill Da <u>t</u> a	Imaging	Clinical <u>S</u> heet	T <u>h</u> erapy	Merge	<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 (<u>N</u>ew)

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:

- **O**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 **New Patient Extended** module affords the following improvements:

он	New Patient	×
Insert data for a	Blood Type Unknown 💌	Patient Photo
Second Name *	Profession	
Age German Germa	-Father's Name	Load <u>File</u> Note
Sex * O Male O Female Address	Mother's Name	
City	Parents are together	The patient
Next of Kin	Has Insurance	Has viewed and approved the treatment consent form
Telephone + 39 * Indicates required fields	○ Yes ○ No ⑧ Unknown	Consents to the use of the data for additional services
<u>0</u>	K 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:



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

	<<	<	June 2022			> >>	
	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	ın 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:

	New Patient							
Insert data for a	new patient	Patient Photo						
First Name *	Blood Type Unknown 👻							
Second Name *	Marital Status							
Tax Number ID	Profession							
Age	Unknown							
Age	Father's Name	New Photo File						
Years 0 Months 0 Days 0		Note						
	🔾 Dead 🖲 Unknown 🔾 Alive							
Sex * 🔾 Male 🔍 Female	Mother's Name							
Address								
City	○ Dead							
	Parents are together							
Next of Kin	🔾 Yes 📿 No 💿 Unknown	·						
Telephone +39	Has Insurance	The patient						
* Indicates required fields	🔾 Yes 🔾 No 🖲 Unknown	Consents to the use of the data for additional services						
OK Anamnesis Cancel								

By clicking on the **New Photo** 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.



By clicking on the **Capture** button a picture is taken and the location of the selection is shown in red.



By clicking on the **OK** button the picture is attached to the patient information.

он	New Patient	×
Insert data for a	new patient	Patient Photo
First Name *	Blood Type	
	Unknown 👻	
Second Name *	Marital Status	
	Unknown 🔫	
Tax Number ID		
	Profession	
	Unknown 👻	
Age *	Eather's Name	New Photo File
Age		<u>New Photo</u> <u>File</u>
Veste 0 Menthe 0 Dave 0		Note
rears o Months o Days o	🔾 Dead 🔍 Unknown 🖓 Alive	
Sex * 🔾 Male 🔾 Female	Mother's Name	
Address		
	🔾 Dead 🖲 Unknown 🔾 Alive	
City		
	Parents are together	
		The patient
Next of Kin	🔾 Yes 🔾 No 🔍 Unknown	Has viewed and
	Has Insurance	approved the treatment consent form
Telephone +39		consent form
	🔾 Yes 🔾 No 💿 Unknown	Consents to the use of the data for additional
* Indicates required fields		services
<u>0</u>	K Ana <u>m</u> nesis <u>C</u> ancel	

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



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			Х	
Patient Code: 530 First Name: Phile	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	Allowsies	
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)	
	Physi	ological History		
Diet 🔽 Normal 🗌 Other				
Alvo 🔽 Normal 🗌 Other		Period V Normal Other		
Diuresis 🗹 Normal 🗌 Other		Menopause Volume No Yes Years 0		
Alcool 🖌 No 🗌 Yes		HRT 🔽 No 🗌 Yes		
Smoke 🗹 No 🗌 Yes		Pregnancies 🗹 No 🔄 Yes Number 0	Delivered 0 Aborted 0	
Drugs 🖌 No 🔄 Yes			······································	
	Save	e <u>C</u> ancel		

8.4.7 Patient Consensus

Consent from a patient is needed regardless of the procedure, whether it's a physical examination or something else. The principle of consent is an important part of medical ethics and international human rights law. In Open Hospital there are two types of Patient consent: - Consent to treatment: consent to treatment means a person must give permission before they receive any type of medical treatment, test or examination. This field is mandatory. - Consent to additional services - consent to additional services means that the person consents to the use of the registered data for additional services, such as communications, mails, calls, follow ups reminders, digital services, etc. This field is NOT mandatory, but one hospital may decide to introduce it in its paper forms.

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: 13y 0m 0d Sex: M	Admission / Discharge Operation Note Ward From Health Unit	Progressive in Year *
Tax Number ID	Admission Date * Admission Type *	Malnutrition
Address City	Diagnosis -IN- *	
Next of Kin Telephone	Discharge Date Bed Days	Discharge Type
+ 39 Blood Type Insurance	Diagnosis -OUT-	
Patient Notes	n. 2	v
	n. 3	
		* Indicates required fields
	Save Examination Anamnesis Close	

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



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.



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:

- **<u>Save</u>**: 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 Browser							
	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 W	A
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	м	Kellog - Springfiled - +39		
MALE WARD	523	Quinlan Coors	6y 10m 19d	М	Derbyshire - Franlkin St 12 - +416824999		
MATERNITY WARD		Harry Colterson	62y 7m 7d	М	Ottey - Westeman St. 12 - +912314411	MALE WARD	
Count: 478	Count: 478 521 Betta Jamison 10y 10m 1 F Kensington - Kinney Rd. 43 - + 39		Kensington - Kinney Rd. 43 - +39		_		
	520	Rochester Lenny	0y 10m 20d	М	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	M	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	M	Guarinton - Courtney ST. 27 - +39		_
All	514	Mario Rossi	28y 10m 3d	M	Roma - Via Verdi - +397653431		_
Search Key	513	Makenzie Everton	27y 9m 29d	M	Albrington - Wayland 21 - +3924534314		_
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	<u> </u>	
<u>N</u> ew <u>E</u> dit <u>D</u> elete	Admission	Examination OPD	Bill	Da <u>t</u> a	Clinical <u>Sheet</u> Therapy Merge	<u>C</u> lose	

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's 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:

~			Patient Examina	tion					- 🛛
		Date	30/05/2022 🛅 12:34	+		[Complain		
	(H)	Height			cm	171			
BMI: 23.9	(w)	Weight			kg	69.9			
Normal weight		Arterial Pressure	min 80 / 120 I	nax	mmHg	I			
Norman weight		Heart Rate	\frown		bpm	60			
		Temperature	\frown		С	36.0			
		Saturation		\Box	%	98.0			
		HGT	\Box		mg/dl	80			
		Respiratory Rate	$-\nabla$		bpm	20			
		Diuresis Vol 24H	\bigtriangledown		ml	100			
		Diuresis	Oliguria	•					
		Bowel	Diarrheal 🔹	r					
		Auscultation	Crackles	-					
DATE	(H)	(W) AP	HR T 02	HGT I	RR D2	4H D	В	AUSC	NOTE
22/11/2020 02:35	171	69.9 80/120	60 36.0 98.0	80	- 10	0 Oliguria	Diarrheal	Crackles	
			<u>S</u> ave <u>D</u> elete	<u>P</u> rint	<u>C</u> lose				

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 Ad	mission Record		- 🔇
	Code: 120	Admissior) / Discharge Operatio	n Delivery Note		
	Name: Knupp Eric Age: 70y 0m 15d	Operation			Da	te 24/06/2022 11 8:27 +
	Sex: F	Result	Success		▼ Tra	ans Unit
	тов:	Remarks				
Tax Number ID						Add Clear Delete
Address	City		DATE	OPERATION DESIGNATION	RESULT	TRANS UNIT
Main Road 6	Nyacara					
Parents	Nyacara					
Next of Kin	+ 05478146					
Blood Type	Insurance					
Marital Status	Profession					
Patient Notes						
		v	<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 **Delete**. When finished, click on the button **Save** 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 5 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 the 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 Reco	rd	- 🔇				
	Code: 348	Admission / Discharge Operation D	Admission / Discharge Operation Delivery Note					
	Name: Meche Carlosy Age: 41y 10m 18d Sex: F	Ward MATERNITY WARD	From Health Unit	Progressive in Year *				
Tax Number ID	108:	Admission Date *	Admission Type *	Malnutrition				
Address	City	Diagnosis -IN- *						
Lane	Fredericksburg	🔍 Acute Flag	ccid Paralysis	-				
Parents								
		04/12/2020 16:58 +	Bed Days 32	Discharge Type REFERRED				
Next of Kin	Telephone							
Blood Type	Insurance	Diagnosis -OUT-						
		n. 1		-				
Marital Status	Profession							
Patient Notes		n. 2		•				
		n. 3		v				
				* Indicates required fields				
		<u>S</u> ave E <u>x</u> amination	<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 Browser						
	CODE	NAME	AGE	SEX	CITY / ADDRESS / TELEPHONE / NOTE	WARD
Admission Status	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	0ak - 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
	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	M	WI - Menasha	
Age	343	Jenks Modesto	0y 10m 9d	F	PA - Waynesboro	CHILDREN WA
From: To:	342	Ellard Hyman	1y 10m 9d	M	VA - Leesburg	CHILDREN WA
	341	Bryden Keneth	0y 10m 9d	M	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	
Carach Key	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	Admission	Examination <u>O</u> PD	Bill	Da <u>t</u> a	Clinical <u>Sheet</u> T <u>h</u> erapy <u>M</u> erge	<u>C</u> lose

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:

~			Pati	ent Data							- 😣
Code: 339 Name: Jack Lupe Age: 44y 5m 2d Sex: M TOB:		DATE 02/11/2020 25/09/2020	WA OPD MALE W	ARD	DIAGN(Malaria Gastro-int	osis in	DIA(Malari Gastro	SNOSIS OUT a p-intestinal	STATUS New Admi 11/10/2020		
Address		City		Evame	Operat	ions	Druge				
Fall road N. 782		River town				IUIIS	EXAM		CODE	RES	ШТ
-Parents -Next of Kin		Telephone									
Blood Type		Insurance									
Marital Status		Profession									
<u> </u>	<u>D</u> PD Chart	<u>A</u> dmission Chart	Di <u>s</u> char	ge Chart	Lau	nch <u>R</u> e	port	<u>D</u> ICOM	<u> </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>Close</u>: 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 – Ø							
Code: 339	Admission / Discharge Operation Note						
Name: Jack Lupe Age: 44y 3m 28d Sex: M	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							
Blood Type	n. 1 Gastro-intestinal DISEASEss (non infective)						
Marital Status Profession							
Patient Notes							
	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			_ = ×
		01	Re-Attendance	New Attendance	🗌 Referral	Referred To		
Attendance Date	e 02/11/2020	8:55	+	OPD No. 134		Ward OPD	–	lotes & Symptoms
Search			🔍 Jack Lu	ıpe			- 1	
Disease Type	2. OTHER INFEC	TIOUS/COMMU	NICABLE DISEAS	iES			-	
Diagnosis			🔍 Malari	a			-	
Diagnosis n.2 (fu	ull list)						-	
Diagnosis n.3 (fu	ull list)						-	
Next visit da	te	15	• Ward	-				
Patient Oper	ation							
Patient (code	e: 339)							
First Name	Jack							
Last Name	Lupe							
Address	Fall road N. 782							
City	River town							
Next of Kin								
Age	44y 10m 6d							
Sex	۲	Male O Fema	le					
50x	Ŭ						-	
			<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 <u>N</u> o			

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 the *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:

V Malnutrition Browser							
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 t	his control:	20/01/2013	15			
Date of t	he 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	1	Patient Data					_ ×
	Code: 258	DATE	WARD	DIAGNOSIS IN	DIA	GNOSIS OUT	STATUS
	Name: Cormoline Rouch	03/11/2020	OPD	Gastro-intestinal	. Gastr	o-intestinal	New Admi
	Age: 7v 11m 6d	02/11/2020	CHILDREN W	Malaria	NO DI	ISEASE	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	4000 - 7000 (NORMAL)
Parents		20/11/2020	5.5 ZN		300	NEGATIVE	
T di citto		20/11/2020	5.6 WA	YSON	301	NEGATIVE	
		03/11/2020	URINAL	YSIS	178	Multiple result	s
		03/11/2020	3.1 Blo	od Slide (Malaria)	206	+++	
		02/11/2020	3.1 Blo	od Slide (Malaria)	108	++++	
		02/11/2020	3.3 ST	OOL MICROSCOPY	99	Multiple result	s
Next of Kin	Telephone						
	+54213434						
Blood Type	Insurance						
Marital Status	Profession						
Patient Notes							
<u>0</u> PI	D Chart <u>A</u> dmission Chart Di <u>s</u> ch	arge 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			
🗌 Laborat	огу		
🗌 Operatio	on		
Drugs			
🗹 Examina	tion		
Launch <u>R</u> ep	oort	<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	
	Lead Image Delate Image	
	Foan unage Meiere unage	

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 a multi-frame image, the whole folder can be selected:

	Open Image	×
Look <u>I</u> n:	T WRIST RIGHT	
📑 scou	JT 3-PLANE RT 2	
📑 scou	JT 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>	Type: All Files	-
	Open Image Cancel	

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 N/D		
	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>A</u>dd Therapy 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 Fo	rm	\otimes
•	Pharmaceutical Cloxacillin 500mg Vial Cyclophosphamide 200mg Vial Cyclophosphamide 500mg Vial Diazepam 5mg / ml 2ml Amp Diclofenac 25mg/ml 2ml Amp Digoxin 0.25 mg/ml 2ml Amp Gentamicin 40mg/ml 2ml Quantity 4 2 © One © Two © Three Frequency within period Every 2 2 d	Cursor for large quantity definition	15	Period Days Weeks Months 4: 1: 0: Starts - Ends Start End 09/06/2022 Is 19/06/2022 Note Small up/down arrows for small quantity definition	



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:

- <u>O</u>K: confirm the data of the therapy. The therapy is not saved until it is confirmed with the <u>Save</u> button in the *Therapy* window (see the <u>Save function</u> 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 (Save)

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.
- **<u>Cancel</u>**: 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.
- <u>No</u>: 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 the 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.





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

8.10.8.1 Appointments rules

A patient appointment/visit is valid if it does not overlap with:

- other appointments within the same ward
- an existing appointment for the same patient in a different ward

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 Brov	ser						-	0	3
Adminutes Chature	CODE	NAME	AG	E SE)		CITY /	ADDRESS / TELEPHON	IE / NOTE		WAF	RD	\square
Admission Status	531	Mario Rossi	28y 9m	18d M	Via Verdi	i - Roma						
All	529	Sara Hucklington	0y 8m	20d F	Kulele - L	ong Road 1.	- + 39					
	528	Kenty Willis	14y 6r	3d F	Jikney - F	urja Street 8	1 - +3914413					
Ward	527	Marcus Kellop	52y 9m	10d M	Mirly - Fu	llister Pl. 45/	b-+396153134					
CHILDREN WARD	526	Genina Justterin	36y 5m	13d F	Uribe - G	houlam Rd 2	31 - +393452432					
FEMALE WARD	525	Mary Garrington	0y 7m	0d F	Kendring	- Ganston -	+39					
	524	Geremia Dickinson	67y 8r	13d M	Kellog - S	Springfiled	+39					
MALE WARD	523	Quinlan Coors	6y 10r	12d M	Derbyshi	re - Franlkin	St 12 - +416824999					
MATERNITY WARD	522	Harry Colterson	62y 6m	21d M	Ottey - W	/esteman St.	12 - +912314411			MALE WA	RD	
Count: 478	521	Betta Jamison	10y 10	nld F	Kensingt	on - Kinney F	Rd. 43 - +39					
	520	Rochester Lenny	0y 10r	13d M	Warengt	on - Letterm	an St. 512 - +005199	944				
Age	519	Jeanna Rickember	3y 10r	15d F	Justin - Li	avon Road 6	2 - +2243143213					
From: To:	518	Jeremy Lindon	58y 2m	15d M	Misurel -	Stenton Pla	za 151 - +394252422	2				
	517	Maria Njoko	20y 5m	16d F	West Kur	tika - Mongi	Road 56 - +2434\334	1				
Sex	516	Genna Susterlind	46y 2m	18d F	Rudkenn	iy - Genev Ro	ad 77 - +381314411	1				-
	515	Alvaro Robertson	12y 1m	13d M	Guarinto	n - Courtney	ST. 27 - +39					
	514	Mario Rossi	28y 9m	17d M	Roma - V	'ia Verdi - +3	97653431					
	513	Makenzie Everton	27y 9m	12d M	Albringto	on - Wayland	21 - + 3924534314					-
	512	Millman Enriquetta	80y 9m	23d F	Crossing	- Hartney St	. 55					-
	511	Henderson Alba	53y 9m	23d F	Street - S	South liford						
Search Key	510	Racuba Scottie	42y 9m	23d F	Valley so	uth - Montgo	omery road 11 - +12-4	43541\54				
	509	Ventier Asia	32y 9m	23d F	Roadinsy	/ - Flamingo	45					
	508	De Koenig Melissa	50y 9m	23d F	FURKIO - M	verriam plaz	a 					
	507	westermann Fred	21y 9m	230 M	Biibao - A	wenida joha	nes 84					-
New Patient Edit Patient	Dele <u>t</u> e Patier	nt <u>A</u> dmission	E <u>x</u> amination	<u>O</u> PD	Bill	<u>D</u> ata	Clinical <u>S</u> heet	Therapy	Mer	ge	<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 is 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
	<u>O</u> PD
	<u>P</u> harmacy
	<u>L</u> aboratory
	<u>A</u> dmission/Patient
	Accounting
	S <u>t</u> atistics
	<u>V</u> accines
AMATICI A TIT'NE	<u>W</u> orksheet
I NDUL	<u>R</u> eports
TAT	<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	2 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			
	00% 💌		_
Registered P	atients	OF Open Hospital	
	St. Luke	Catholic Hospital and College of Nursing	
		P.O. BOX 250 - Wolisso, Southwest Showa Zone	
4		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 martedì	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 or 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
I N N	<u>R</u> eports
A	<u>S</u> ettings
APPEN	<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:

🛃 Communication	n
Contacts	
🕒 allan	
S mary	
C duest	
o 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
Age: 21y 3m 26d Sex: M	MALE WARD MALE WARD
Tax Number ID	Admission Date *
Address	Diagnosis -IN- *
Gorny boul. 21 Wellington	Acute Flaccid Paralysis
Parents	
	Discharge Date Bed Days Discharge Type
Next of Kin Telephone	
+542241	Diagnosis -OUT-
0-	n. 1 Q
Marital Status Profession	
Single	
Patient Notes	
]	
	* Indicates required fields
	Save Examination Close Share alert with: nobody

The box lists all users currently logged into the system (those with the green circle near the name) and allows them 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:

Sommunication	_			23
Contacts	admin 📧			
 admin mary bob guest john 	(00:15:08) ad (00:15:39) me (00:16:54) ad patient ID 468 (00:17:06) me (00:17:15) ad (00:25:16) ad CHILDREN (00:34:52) ad	min : Hello Allan! = : Hello Admin, how are you? min : Fine. I was just checking your report of las 559 has paid the bill so you can archive his file = : Perfect, thank you! min : Thank you too! min : new patient admission: Synthia Yikparwot VARDS min : checharand patient: Synthia Yikparwoth for	t month, the	-
user's info	DISCHARGE			

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
		Dala	to Fou		ol Sh	are ale	rt 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:

Sommunication	
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! (00:17:15) admin : Thank you too! (00:25:16) admin : new patient admission: Synthia Yikparwoth in CHLIDREN WARDS (00:35:20) admin : discharged nationt. Synthia Yikparwoth for NORMAL
-user's info	(00:34:32) Rdmm: useriarged patent: Syntana Insparatori for Northick DISCHARGE **** 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 v Month October v Year 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:

Sommunication	
Contacts	admin 🖾
 admin mary bob 	(00:17:06) me : Perfect, thank you! (00:17:15) admin : Thank you too! (00:25:16) admin : new patient admission: Synthia Yikparwoth in
john	CHILDREN WARDS (00:34:52) admin : discharged patient: Synthia Yikparwoth for NORMAL DISCHARGE *** admin is now offline
ucor's info	(00:43:44) admin is now online (00:43:44) admin : ALERT: 4 Dimethyl Aminobenzaldelyde is about to end
user s into	report:OH005_opd_count_monthly_report
	*** admin wants to share with you this
	report_OH005_opd_count_monthly_report

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 **Settings** 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 an 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.*
- **Other 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 Brov	vser		-	2	8
CC	DDE		DESCRI	PTION			
A		AMBULANCE					
R		REFERRAL					
<u> </u>		SELF					
	New	Edit De	lete	Close]		
				_			

- 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	DESCRIPTION		
D		DEAD		
ES		ESCAPE		
EQ		NORMAL DISCHARGE		
В		REFERRED		
	<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>C</u>lose**: 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:

~	Delivery Type Browser		- 0	8
CODE	DESCRIPT	TION		
С	DELIVERY ASSISTED BY CE	SARIAN	SECTI	ON
N	NORMAL DELIVERY			
V	DELIVERY ASSISTED BY VA	CUUM E	XTRAC	TION
<u>N</u> e	ew <u>E</u> dit <u>D</u> elete <u>C</u>	<u>.</u> 105e		

- <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	-	2	8
C	ODE	DESCRIPTION			
ND		1.NOTIFIABLE DISEASES			
OC		2.0THER INFECTIOUS/COMMUNI	CABLE	DIS	EA
MP		3.MATERNAL AND PERINATAL D	ISEAS	ES	
NC		4.NON-COMMUNICABLE DISEAS	ES		
AO		5. All Other			
	New	Edit Delete Close			

- 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			
0C		8.Occult Blood			
OL		OLD EXAMS			
OT		OTHER			
SP		STOOLPARASITES			
UR		URINALYSIS			
	<u>N</u> ew	<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 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	cal 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 (ma	ax 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:

~ O	peration 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 SUBCUTANEOU	S		
<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	-	ø	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			
	<u>N</u> ew	<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	- 0 🙁					
CODE	DESCRIPTION	OPD	IPD	DAILY	DISCHARGE	UNDEFINED	
OTH001	Amount per d		~	~			
<u>N</u> ew <u>E</u> dit <u>D</u> elete <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	8
	How much is it? O 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				2	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			-	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			
		Save	<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, the 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	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	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			
P		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 Іта	Imaging 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			

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>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 **Update** 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:

он				1	Ward Brows	er						_ _ >
CODE	NAME	TELEPHONE	FAX	E-MAIL	BEDS	NURSES	DOCTORS	HAS OPD	HAS PHA	MALE	FEMALE	DURATION
С	CHILDREN WARD	219			35	18	2		Ľ	~	~	30
F	FEMALE WARD	218			41	15	4		V		V	30
1	MALE WARD	210			53	14	4		~	~		30
M	MATERNITY WARD	211			67	19	4		~		V	30
OPD	OPD	212			0	1	1	~	~	~	V	15
				<u>N</u> ew	<u>E</u> dit <u>I</u>	<u>D</u> elete	<u>C</u> lose					

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 pharm	acy
Male Ward	
Female Ward	
	* Required field

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:

~	Y Diseases Browser – 🖉				
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	1		
107	4.NON-COMMUNICABLE DISEASES	Acute sepsis	1		
29	2.0THER INFECTIOUS/COMMUNICABLE DISEASES	AIDS	1		
75	4.NON-COMMUNICABLE DISEASES	Alcohol and drug abuse			
49	5. All Other	All Other DISEASEs	Н		
12	4.NON-COMMUNICABLE DISEASES	Anaemia	1		
82	4.NON-COMMUNICABLE DISEASES	Animal/snake bite	1		
71	4.NON-COMMUNICABLE DISEASES	Anxiety disorders	1		
68	4.NON-COMMUNICABLE DISEASES	Asthma	1		
93	4.NON-COMMUNICABLE DISEASES	Benine neoplasm"s (all type)	1		
94	4.NON-COMMUNICABLE DISEASES	Cancer of the breast	1		
95	1.NOTIFIABLE DISEASES	Cancer of the prostate			
98	4.NON-COMMUNICABLE DISEASES	Caposis and other skin cancers	1		
103	4.NON-COMMUNICABLE DISEASES	Cardiac arrest	1		
102	4.NON-COMMUNICABLE DISEASES	Cerebro-vascular event	1		
76	4.NON-COMMUNICABLE DISEASES	Childhood and mentle disorders	1		
2	1.NOTIFIABLE DISEASES	Cholera	1		
92	4.NON-COMMUNICABLE DISEASES	Comlpication and surgical care	1		
91	1.NOTIFIABLE DISEASES	Congenital malformations and chromosome abnormal	1		
127	1.NOTIFIABLE DISEASES	Covid-19			
101	4.NON-COMMUNICABLE DISEASES	S Curable Ulcers			
56	2.0THER INFECTIOUS/COMMUNICABLE DISEASES Death in OPD				
13	4.NON-COMMUNICABLE DISEASES	Dental DISEASE and conditions	-		
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 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 C			
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:

Exam Browser - C					
	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 Pastarialam	A 2 CS.C EOD VIDDO CUOLEDA	1	NEGATIVE	
	Select type ALL 💌	<u>N</u> ew <u>E</u> dit <u>D</u> elete <u>R</u> esults	<u>C</u> lose		

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>C</u> ancel	

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:

v	E	xam Browser		- * 8
	Search			
CODE	TYPE A	DESCRIPTION	PROC	DEFAULT
01.01	1.Haematology	1.1 HB	1	>=12 (NORMAL)
1.1.1	1.Haematology	1.1.1 HB (Procedure 3)	3	
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
08.01	8.Occult Blood	8.1 OCCULT BLOOD	1	NEGATIVE
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
03.02	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
03.01	3.Parasitology	3.1 Blood Slide (Malaria)	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	A Postoriology	A 1 CHITUPE AND CENCITAITY (CLC) FOR UA	1	NEGATIVE
	Select type ALL 💌	<u>N</u> ew <u>E</u> dit <u>D</u> elete <u>Results</u>	<u>C</u> lose	

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	<u>1</u>	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	8
ID	TYPE	NAME	CONTEXT	Τ
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	1
49	ORTHOPEDICAL	Osteomyelitis - sequestrectomy	OPD / ADMISSION	1
18	GYNECOLOGICAL	Ovarian tumours	OPD / ADMISSION	1
23	MALE GENITOR-URINARY SYSTEM	paraphimosis	OPD / ADMISSION	1
16	GYNECOLOGICAL	Pelvic abscess	OPD / ADMISSION	1
41	ABDOMINAL GENERAL SURGERY	Penetrating abdominal injuries	OPD / ADMISSION	1
15	GYNECOLOGICAL	Peritonitis	OPD / ADMISSION	-
42	ABDOMINAL GENERAL SURGERY	Peritonitis	OPD / ADMISSION	1
22	MALE GENITOR-URINARY SYSTEM	phimosis	OPD / ADMISSION	1
29	MALE GENITOR-URINARY SYSTEM	Prostate biopsy	OPD / ADMISSION	-
	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 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>C</u>lose**: 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	5				
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	wser – 🗸 😢
CODE	TYPE	DESCRIPTION
1	Child	BCG
6	Child	DPT 1 - HepB + Hib 1
7	Child	DPT 2 - HepB + Hib 1
8	Child	DPT 3 - HepB + Hib 1
9	Child	MEASLES
2	Child	POLIO 0 C
3	Child	POLIO 1 C
4	Child	POLIO 2 C
5	Child	POLIO 3 C
10	Pregnant	TT VACCINE DOSE 1
15	No pregnant	TT VACCINE DOSE 2
11	Pregnant	TT VACCINE DOSE 2
16	No pregnant	TT VACCINE DOSE 3
12	Pregnant	TT VACCINE DOSE 3
17	No pregnant	TT VACCINE DOSE 4
13	Pregnant	TT VACCINE DOSE 4
18	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	r
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:

Y 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.6 Sickling Test I.6 Sickling Test I.6 Sickling Test I.6 Sickling Test I.7 Strest I.6 Sickling Test I.7 Strest I.7 Str	■ 10 0 10 12 8 14 14 14 14 14 10 0 10 10 12 8 14 14 14 14 10 0 10 12 8 14 14 14 14 14 14 10 0 0 10 12 8 14 14 14 14 10 0 0 10 12 8 14 14 14 14 14 14 10 0 0 10 10 10 10 10 10 10

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 (Manage Lists)

Once the *Manage Lists* 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				3
ID	NAME	ADDRESS	TAX NUMBER ID	TELEPHONE	FAX	E-MAIL	NOTE	DELETED
1	JMS							
2	Enterpise Limited	Sesame Strett - 73149 New		+22.243454252	+22.243454252	info@enterprise.com		
				Entre Delete	2			

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:

Date From: 18/07/2022 Image: Telephone 20/07/2022 Image: Telephone SMS SENT 19/07/2022 08:02 18/07/2022 08:02 0657059061 The test is complete 19/07/2022 08:05 18/07/2022 18:04 +1443521111 The lab work is available 19/07/2022 08:05 20/07/2022 08:13 4723360054 Please call to schedule an a	SMS Manager _ 🗆 🗙
DATE SCHED. DATE TELEPHONE SMS SENT 19/07/2022 08:02 18/07/2022 08:02 0657059061 The test is complete 19/07/2022 08:05 18/07/2022 18:04 +1443521111 The lab work is available 19/07/2022 08:05 20/07/2022 08:13 4723360054 Please call to schedule an a	Date From: 18/07/2022 15 Date To: 20/07/2022 15
19/07/2022 08:02 18/07/2022 08:02 0657059061 The test is complete 19/07/2022 08:05 18/07/2022 18:04 +1443521111 The lab work is available 19/07/2022 08:05 20/07/2022 08:13 4723360054 Please call to schedule an a	HED. DATE TELEPHONE SMS SENT
19/07/2022 08:05 18/07/2022 18:04 +1443521111 The lab work is available 19/07/2022 08:05 20/07/2022 08:13 4723360054 Please call to schedule an a	/2022 08:02 0657059061 The test is complete
19/07/2022 08:05 20/07/2022 08:13 4723360054 Please call to schedule an a	/2022 18:04 +1443521111 The lab work is available
	/2022 08:13 4723360054 Please call to schedule an a
New Delete Close	New Delete Close

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		
1	Characters	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>Submit</u> <u>Cancel</u>	

Once one has successfully logged into the system, the <u>U</u>sers & Groups button in the Settings 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 Browser				
	GROUP	DESCRIPTION			٦
admin		USER with all the privileges			
guest		Read Only Users			
	<u>E</u> dit <u>N</u> ew Group	<u>M</u> enu <u>D</u> elete <u>C</u> lose			

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
REMATION 2.4 4 TIT 3.6		NAMATICI SA 411134	
N N N N N N N N N N N N N N N N N N N			
SPITAL		SPITAL	
E		E	

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:

OH User Browser _ 🗆 X						
USER	GROUP	DESCRIPTION	LOCKED			
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 last column, **LOCKED**, if checked indicates that the user is currently locked out from logging into the system.

The functions available in this window are:

• **Select 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>C</u>lose**: close the window.

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

он	Edit User X			
Group:	Registration Office 👻			
Name:	Katy			
Description:	Receptionist			
Locked:				
	<u>O</u> K <u>C</u> ancel			

In editing mode, the group, the description, and whether the user is locked out from logging into the system can be modified. To **lock** or **unlock** a user account check or uncheck the box after **Locked:**.

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
MATECI A Fotae	Vaccines
	<u>W</u> orksheet
INDUZ	<u>R</u> eports
	<u>S</u> ettings
HOSPI	<u>H</u> elp
ō	Logout

The *Worksheet* module works at the Ward (Department) level; therefore, a ward must first be selected:



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):

V Worksheet –					- 😣	
Select a Ward	EMALE WARD	<u>G</u> o to date:	29/07/2022	Today		
	29/07/2022		30/07/2022			
<-Prev.	Visits 06:30 - (Pat. ID: 505) - Curtney Gina - ND (08:10 - (Pat. ID: 512) - Millman Enriquetta - 13:10 - (Pat. ID: 560) - Zoey Watkins - N/D (iOMin) IVD (20Min) 20Min)	Visits 09:30 - (Pat. ID: 510) - Racuba Scottie - N/D (20Min) 10:50 - (Pat. ID: 519) - Jeanna Rickember - N/D (20Min)		Next->	
	☐ Add Visit Remove Visit	Print this day's visits (1)	Add <u>Visit</u> Remove Visit Print th	is day's visits (2)	<u>Ø</u> <u>C</u> lose	

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 section 8.10.8.1 Appointments rules describes the constraints to create a valid appointment/visit.

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.
- $\underline{Next} \rightarrow$: 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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