Software Configuration Guide PatientOS

Version 0.86

Revision History

Date	Version	Description	Author
13/12/2008	0.86	Initial	Greg Caulton

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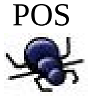
1. Facility Setup

1.1 Introduction

1.1.1 Default Settings

This document reflects the default functionality available in the standard distribution of PatientOS version 0.86. The distribution may be customized using the PatientOS database tools to fit the workflow and requirements of the healthcare organization.

1.1.2 Definitions

POS	Refers to the PatientOS software as a system.
	Known issues with 0.86

1.2 System Login

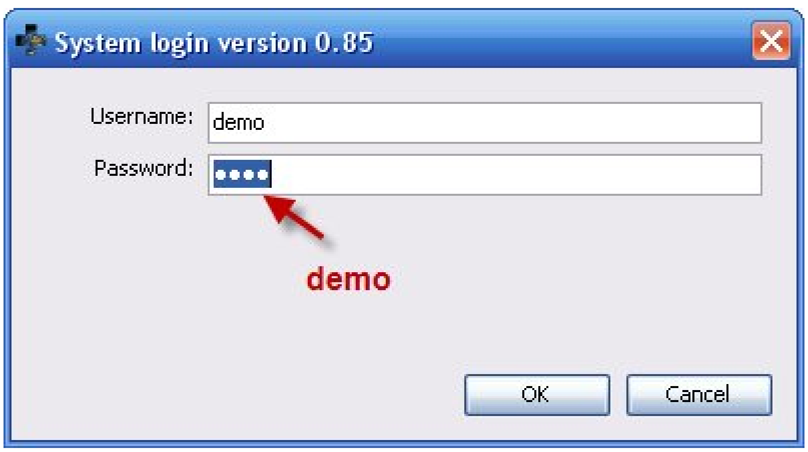


Figure 1 System Login

1.2.1 Default Logins

Username / Password	Passwords are case sensitive.
demo / demo	A physician user login with privileges to toggle between several roles
admin / admin	An administrative user login with privileges to toggle between several roles
demonurse / demo	An inpatient nursing user login
demovet / demo	A veterinary user login

1.3 Facilities

PatientOS provides mult-facility features where a facility is treated as an organization with a unique configuration and security. Most of the content is facility specific – although it may be shared across the entire organization.

1.3.1 Test Facilities

The default database includes 3 facilities to provide initial testing an evaluation.

Test Clinic	Registration and forms to demonstrate a small clinic practice.
Test Hospital	A hospital with acute care.
Vet Hospital	A vet teaching hospital

Users with multi-facility access are able to toggle between the facilities from the Tools menu and selecting Change Facility on the next menu.

Figure 2 tools menu

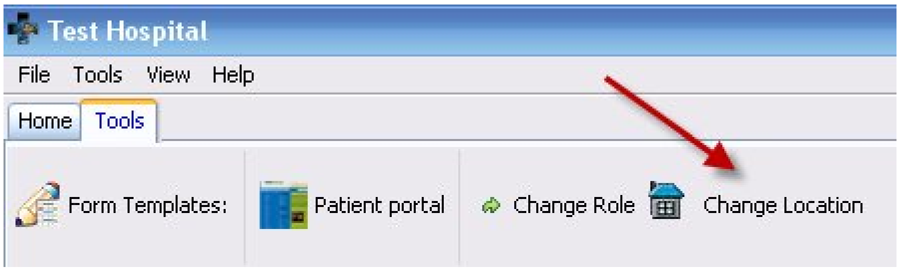


Figure 3 Change Location

1.3.2 Creating a New Facility

1) To create a new facility we will login as admin/admin and select the Locations link.

Figure 4 Locations Link

Note the Locations link will be moved in the near futre to be under Registration. After the Locations tool opens you will see existing facilities on the left

2) Press the Add Facility button to add a new facility. Review the location names section before continuing.

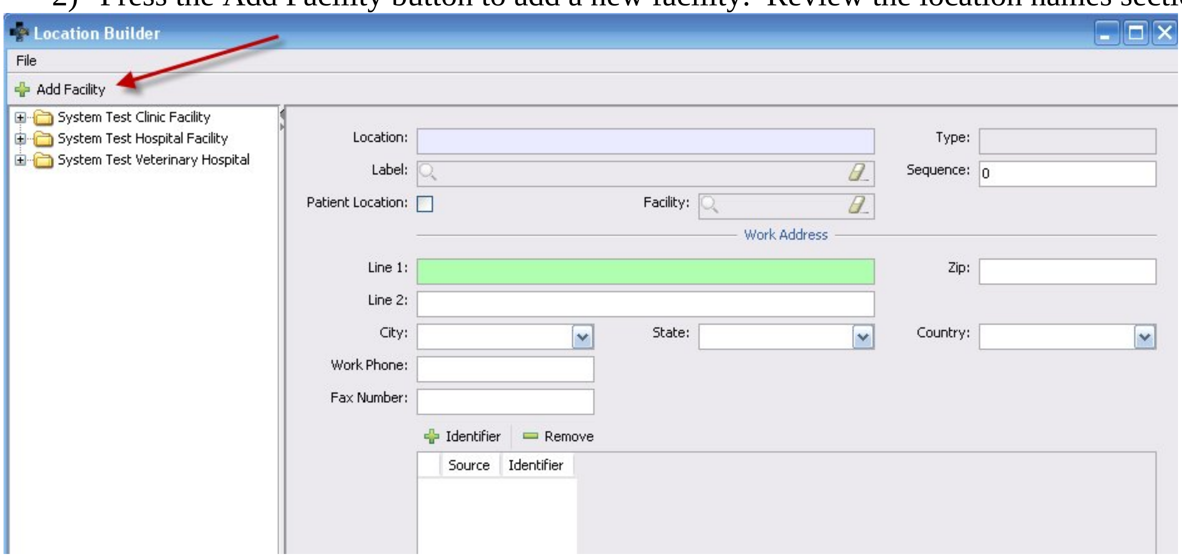


Figure 5 Locations Tool

Creating a New Facility

3) Enter the facility name. Optionally you can enter multiple facilities, one on each line.

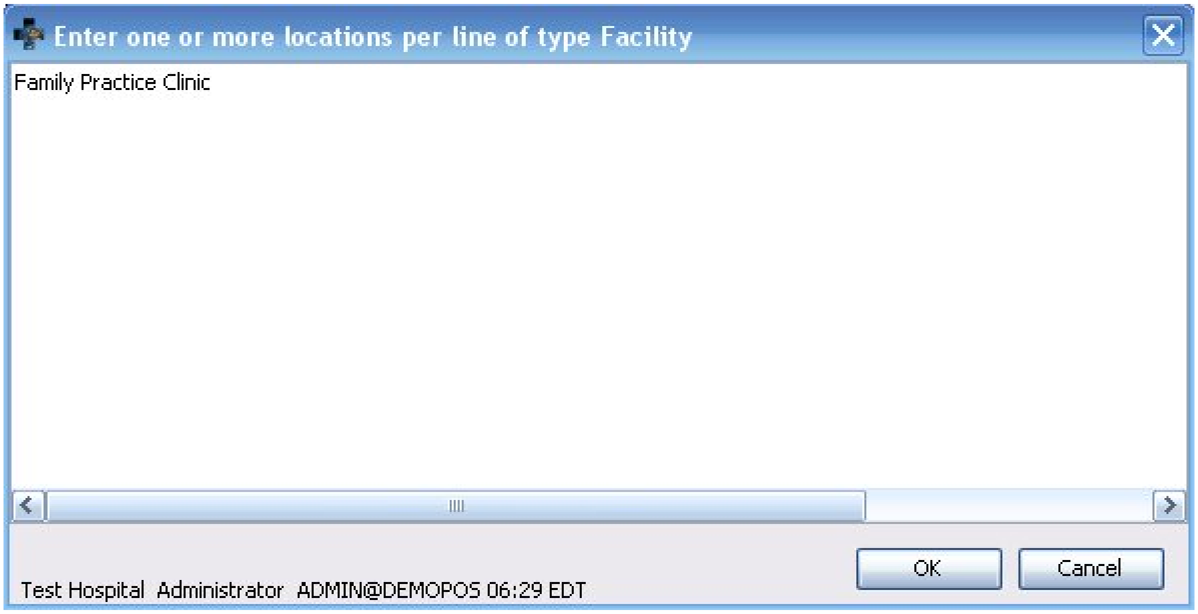


Figure 6 New Facility

 Known Issue: After saving the facility it does not immediately appear in the list. Close the facilities window and reopen the link.

4) Select the facility so it is highlighted and right click on the facility to view the menu of actions.

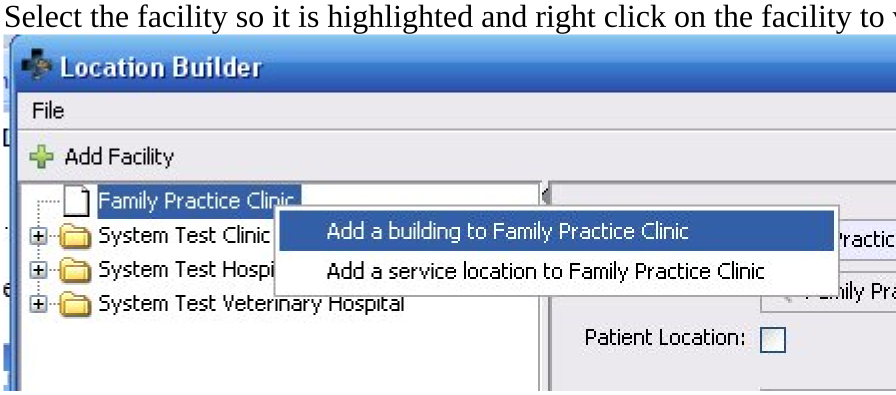


Figure 7 Adding locations to a facility

5) Add one or more buildings your new facility.

Creating a New Facility

6) Repeat the process on the building to add units or other location types.

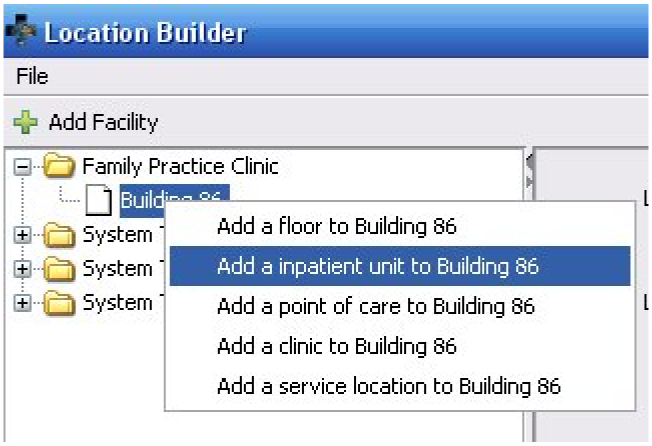


Figure 8 Add location types

7) Each location must have a full unique name.
The short name can be defined for display within the application.

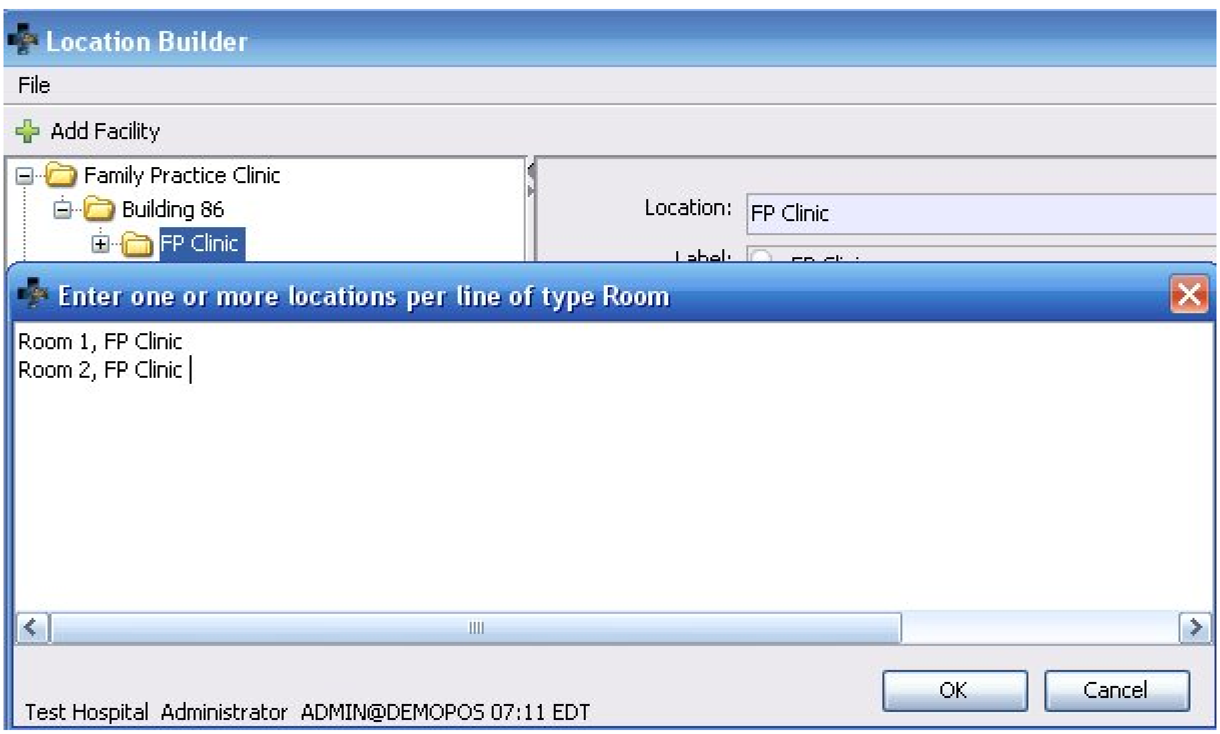


Figure 9 Add rooms

8) The details of each location should minimally define
    a. The full location long name (required)
       e.g. 201A, Some Clinic, MYH
    b. The short name should be used to display just thant lcoation
       e.g. 201A
    c. Whether this is a patient location or not
    d. The facility

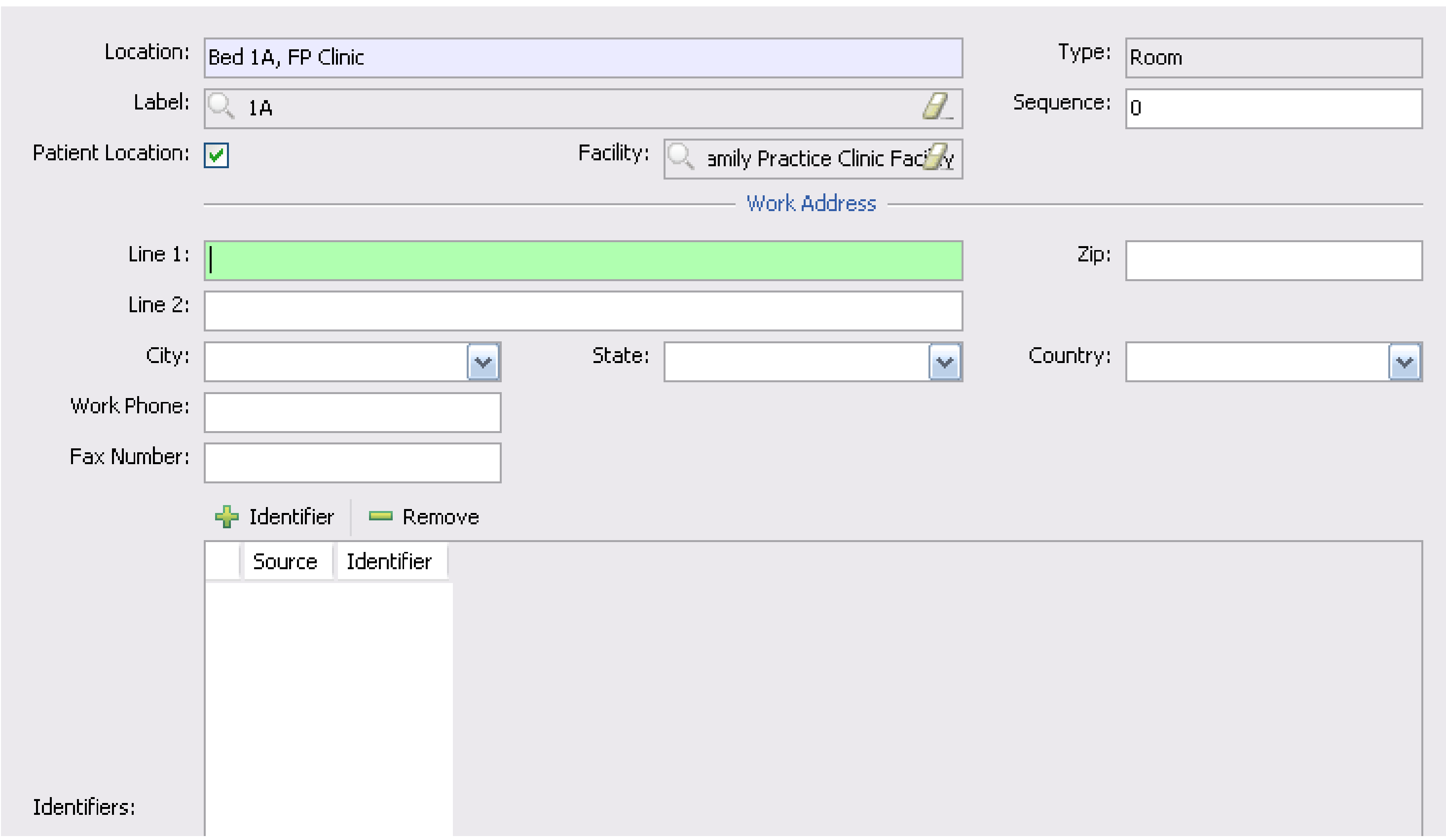


Figure 10 Location details

    e. Optionally an address and telephone information can be recorded.
    f. Identifiers are typically used to provide HL7 location mapping for external systems.

2. Billing Setup

The billing section is in the second column when logged in as admin/admin

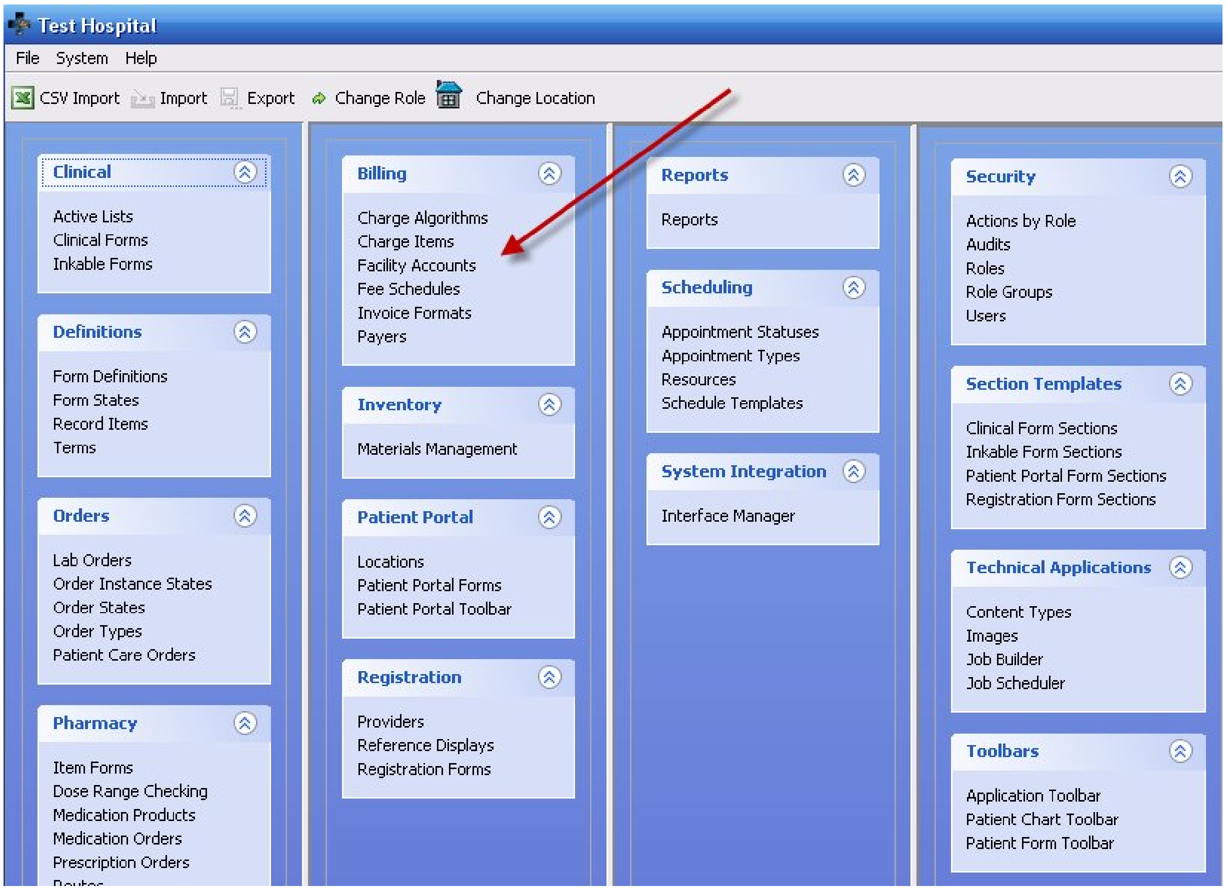


Figure 11 Billing Links

2.1 Facility Accounts

Facility accounts are used to manage invoice charges. Each charge is defined as a charge item and each charge item is associated with an account number. When invoices are processed as final the account balance is updated. The facility accounts are a tool to help manage financial components of the system. They can be a granular as needed or few in number.

Facility Accounts

1) Click Facility Accounts to open the Facility Accounts builder
2) Click add Facility Account
3) Enter the account number, name, facility and ledger type.

The first account we will build is a generic revenue account for procedures and services.

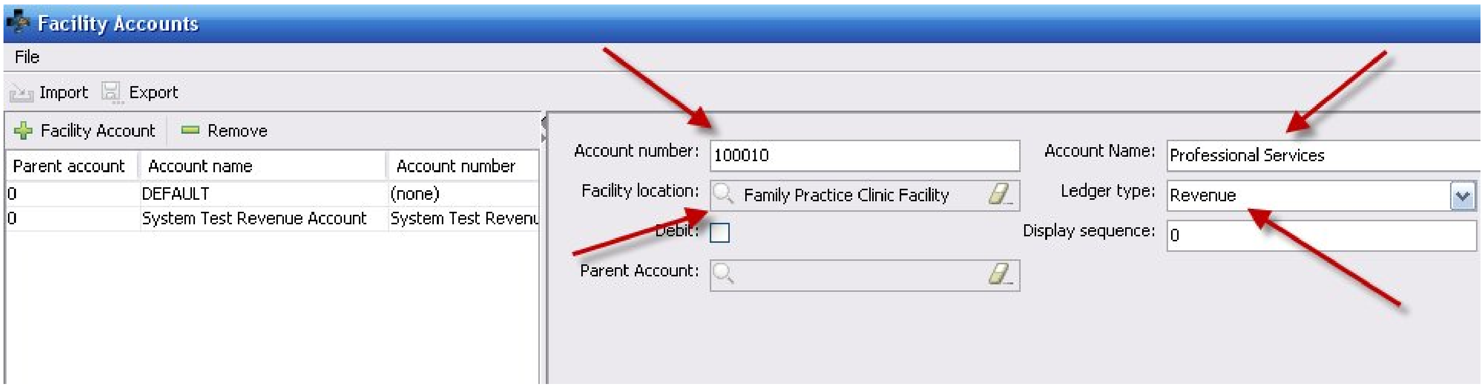


Figure 12 Adding a revenue account

The second account we will use to associated test that need to be sent out such as lab tests or radiology exams.

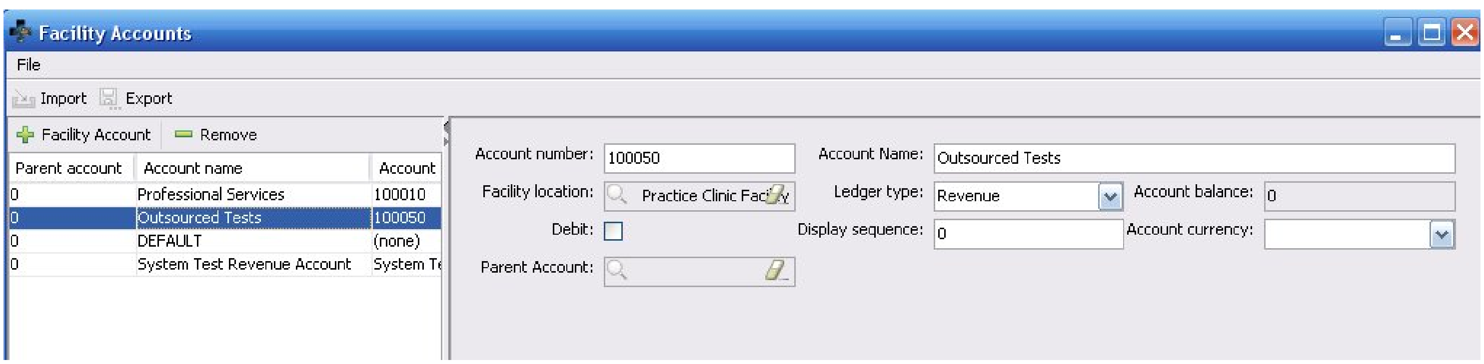


Figure 13 Send out account

2.2 Fee Schedules

A fee schedule is used to discount or markup charges for the invoice. The fee schedule can define a single percentage modifier or you can customize individual charges for the fee schedule. To add a fee schedule

1) Click Fee Schedules to open the Fee Schedule builder.
2) Click Add Fee Schedule
3) Enter the unique fee schedule name.
4) Optionally enter a charge multiplier that is not 1 and check off if the discount should show on the invoice.
5) A charge multipler value is multiplied by the charge. A charge multiplier of 0.80 is equivalent to a 20% discount.

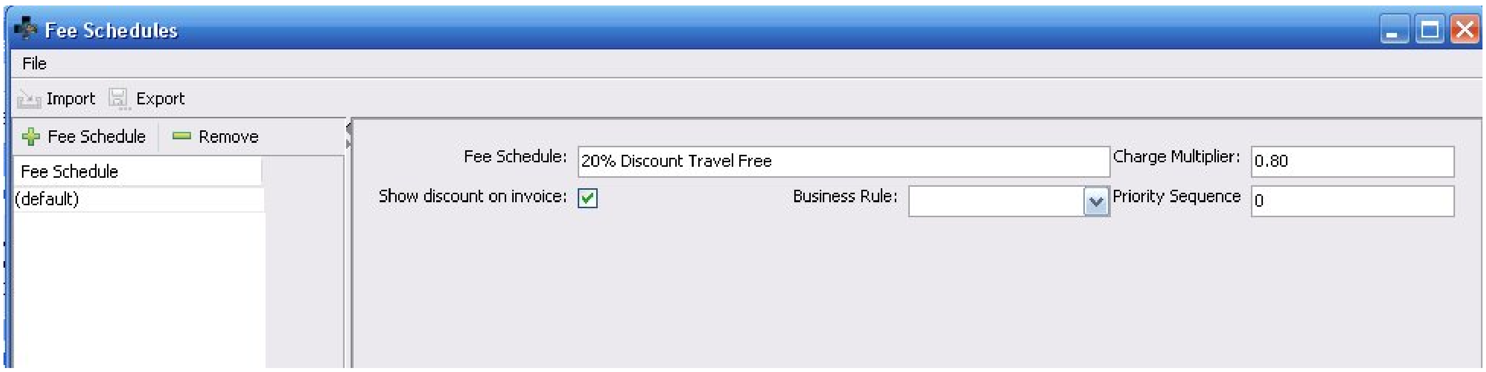
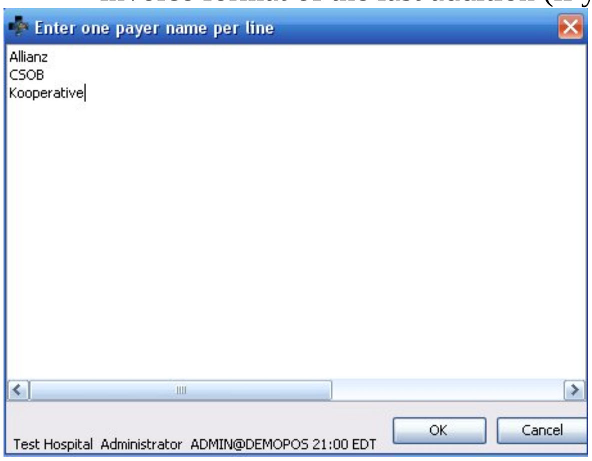


Figure 14 Add fee schedule

2.3 Payer Programs

A Payer is an insurance company, or government or any organization that will ultimately be charged for the patient care. The patient can be a payer or a 3rd party. A system default of Patient Self Pay is included which you can optionally use. Remember system defined reference is updated with an upgrade and so should be used as is – or create reference data. (Settings are the exception). To add a new payer program.

1) Click Payers to open the Payer builder.
2) Click Add Payer
3) Optionally you can enter a list of payer names and the payers will be entered with the fee schedule and invoice format of the last addition (if you have made any).



4) Enter a unique program specific name and choose the fee schedule (if not the default).

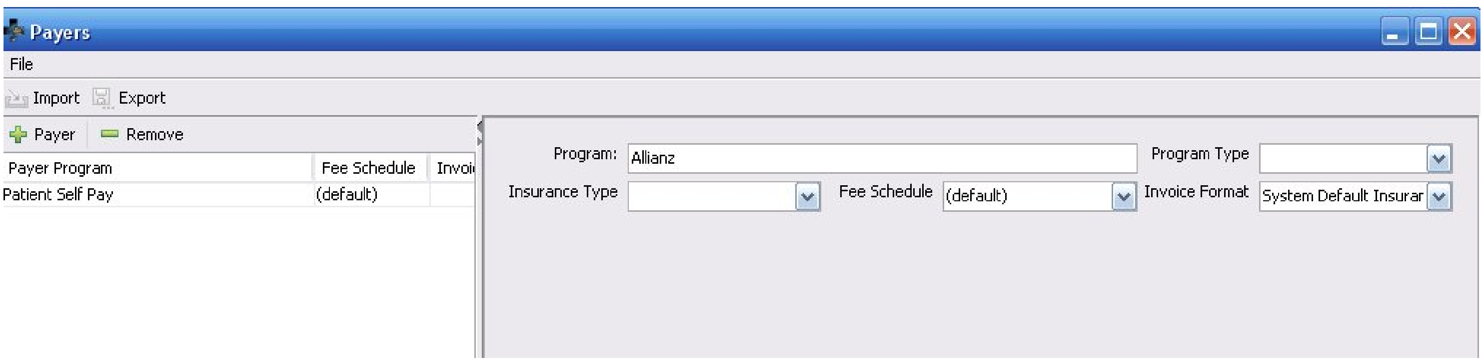


Figure 15 New Payer

In version 0.86 the default Payer form is rudimentary. The main purpose is to link a fee schedule to the payer. The fee schedule will dictate any discounts or markups to the charges. The patient will have a payer assigned upon registration of the visit.

 If you add a new program the Apply button will only activate after tabbing out of the program field.

2.4 Charge Items

A Charge Item is an item with a unique billing code used to represent a charge. Some charge items may be specific, such as a fee for travel. Other charge items may be generic in nature, inheriting their properties from the inventory item, medication, lab test or other chargeable item. To add a new charge item.

1) Click Charge Items to open the Charge Item Builder
2) Either Click Add New to add a single charge item or
3) Click Add charge items to add multiple charge items
4) Enter the unique (within a facility) charge item name, type, unique charge code (within a facility), quantity and facility account and location.

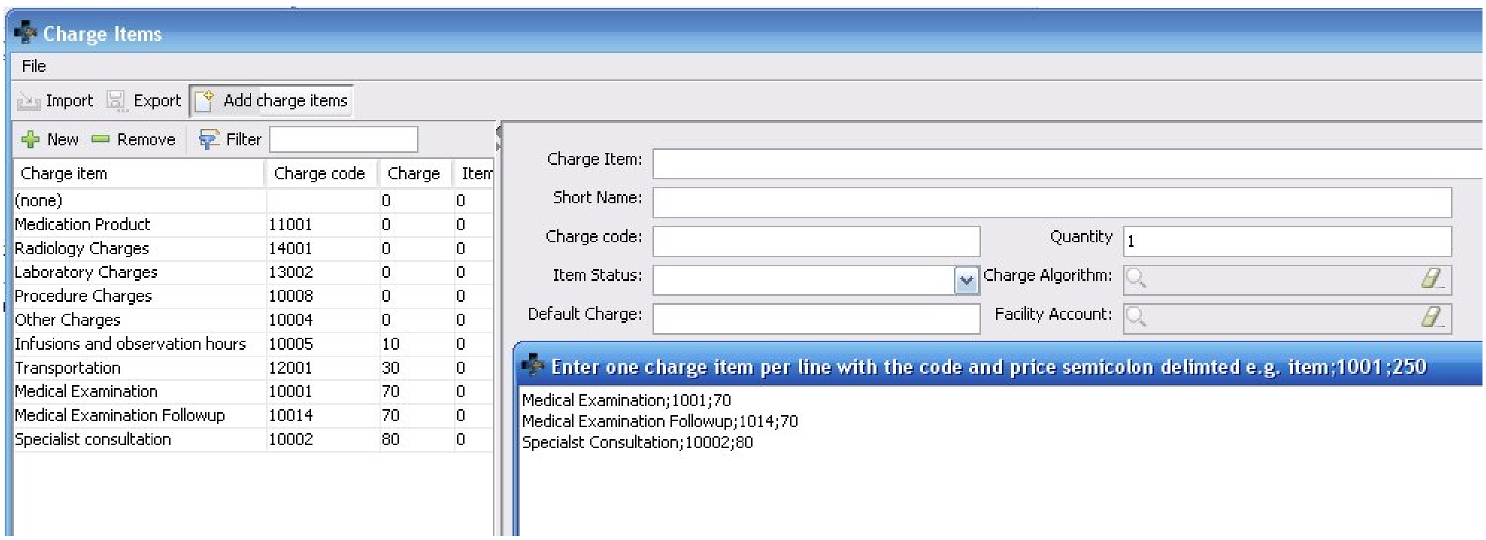


Figure 16 Add multiple charge items

2.4.1 Charge items with a zero charge

Charge items without a charge can be built. The assumption is that the charge item will either be used for manual entry of charges or associated with either

a) A term which defines the charge amount.
b) A control which allows the user to enter the charge amount.
c) An inventory item such as a medication.

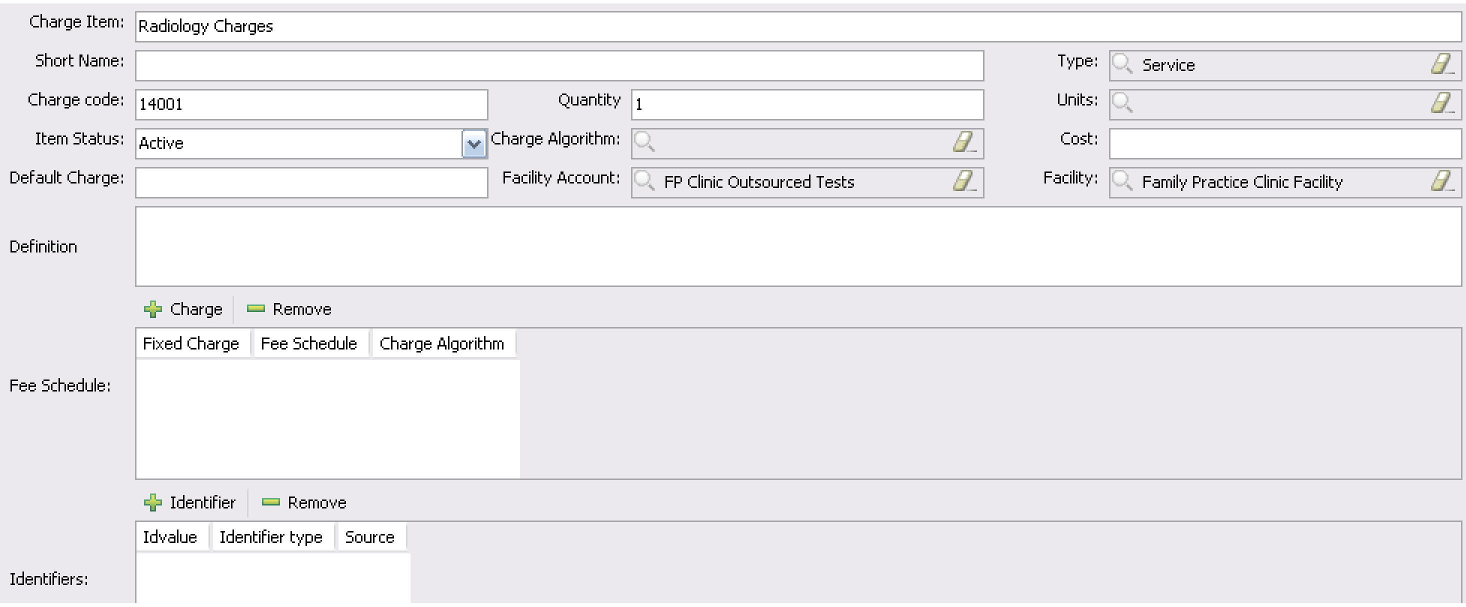


Figure 17 Charge Items without a charge

2.4.2 Charge Items discounted by fee schedule

To discount a fixed price charge item for a specific fee schedule.

a) Click Add Charge for the fee schedule.

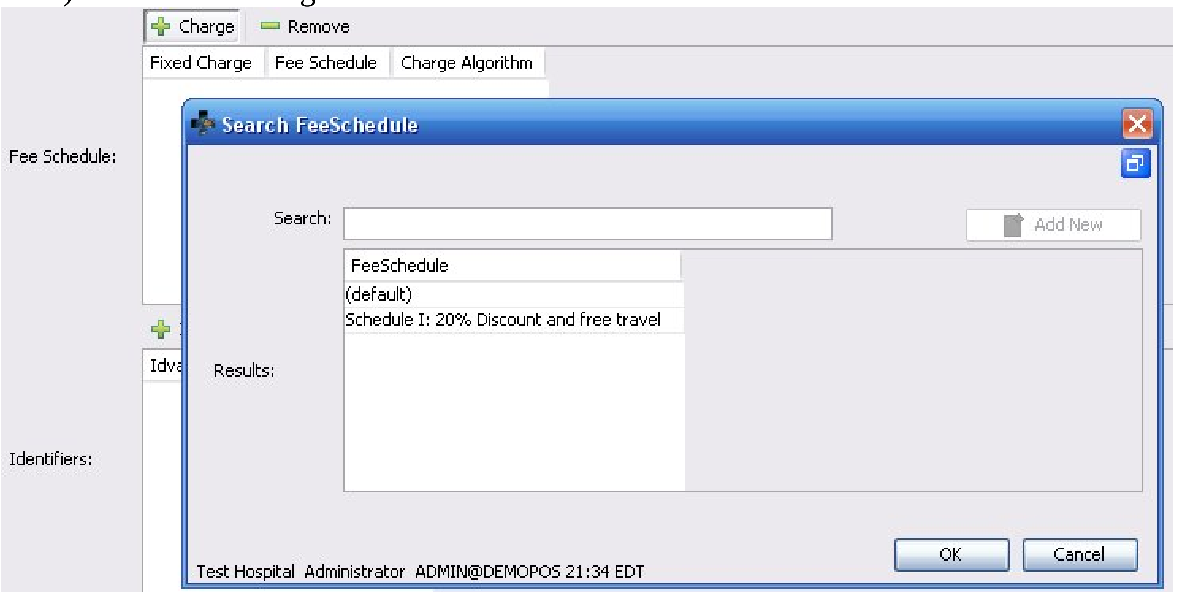


Figure 18 Fee Schedule Discount for charge item

b) Select the Fee Schedule.
c) Select an algorithm to apply – or cancel and enter the fixed final price of the item. Note the 0.86 release does not have any charge algorithms defined yet.
d) For a full discount enter 0 as the final charge.

Figure 19 Fully discounted charge item

2.4.3 Charge Items Charge By Quantity

You can create a charge which represents a single unit of the item. Again with the expectation that either the user enters the quantity during a manual charge or that a term or a form will provider the quantity.

In the example below you can see that the charge is $10 per hour for infusion and observation hours. Note the currency is not $, rather the default currency for the facility.

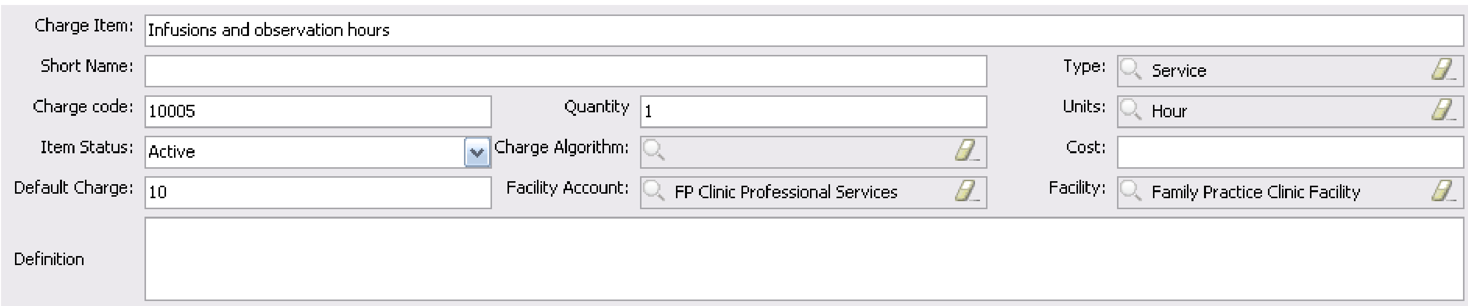


Figure 20 Charge Item by Qty

3. Registration Forms

In order to add patients or add new visits you need to either use the system default forms or create custom forms for the facility. To create the custom registration form sections for both adding new patients and new visits you would

3.1 Registration Sections

1) First add to the reference group FormFolder a value for our facility
2) Click Registration Form Sections and open the list of Registration Form Sections
3) Click on an existing section and you will see a preview of the form if the form has been saved (since the preview functionality was added).

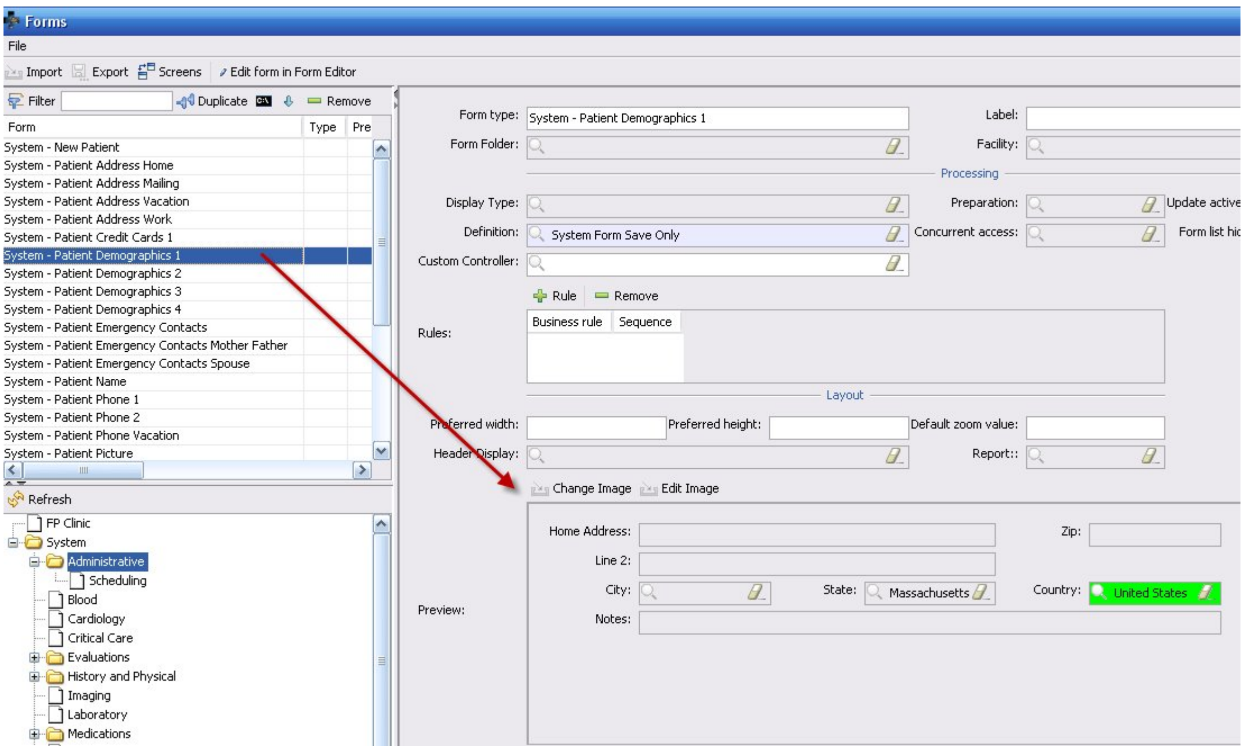


Figure 21 Registration form section preview

4) You can also click Edit form in Form Editor and after saving the preview will be generated.
5) Locate a section with controls that will also be on your new section.
6) Press duplicate on the toolbar to create your copy.

Duplicating a registration section

 Known issue: Adding or duplicating a form does not update this form list. You must close the list and click Registration Sections again.

7) Enter the new section name, ideally prefixed with the facility name.
8) Repeat for all sections before reopening the registration form list to see the additions.

Note to search for a section by name type into the filter text box

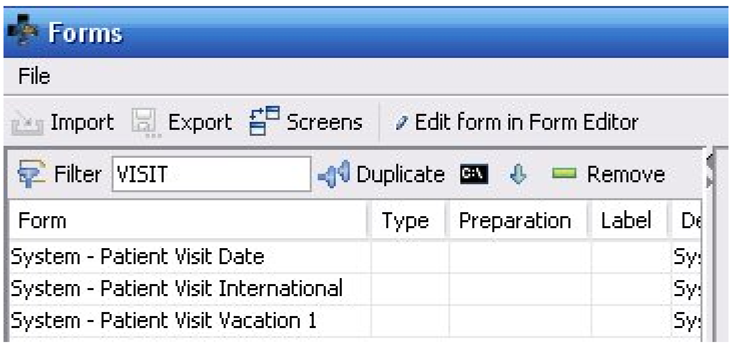


Figure 22 Form section search

9) Once you have duplicated the closet equivalent form you can view the list and edit each.
10) Click on the form and click Edit form in Form Editor.

3.2 Editing the registration section

See the Form Editor for details of editing a form

3.3 Creating the combined registration form

1) Click Registration Forms and open the list of Registration Forms

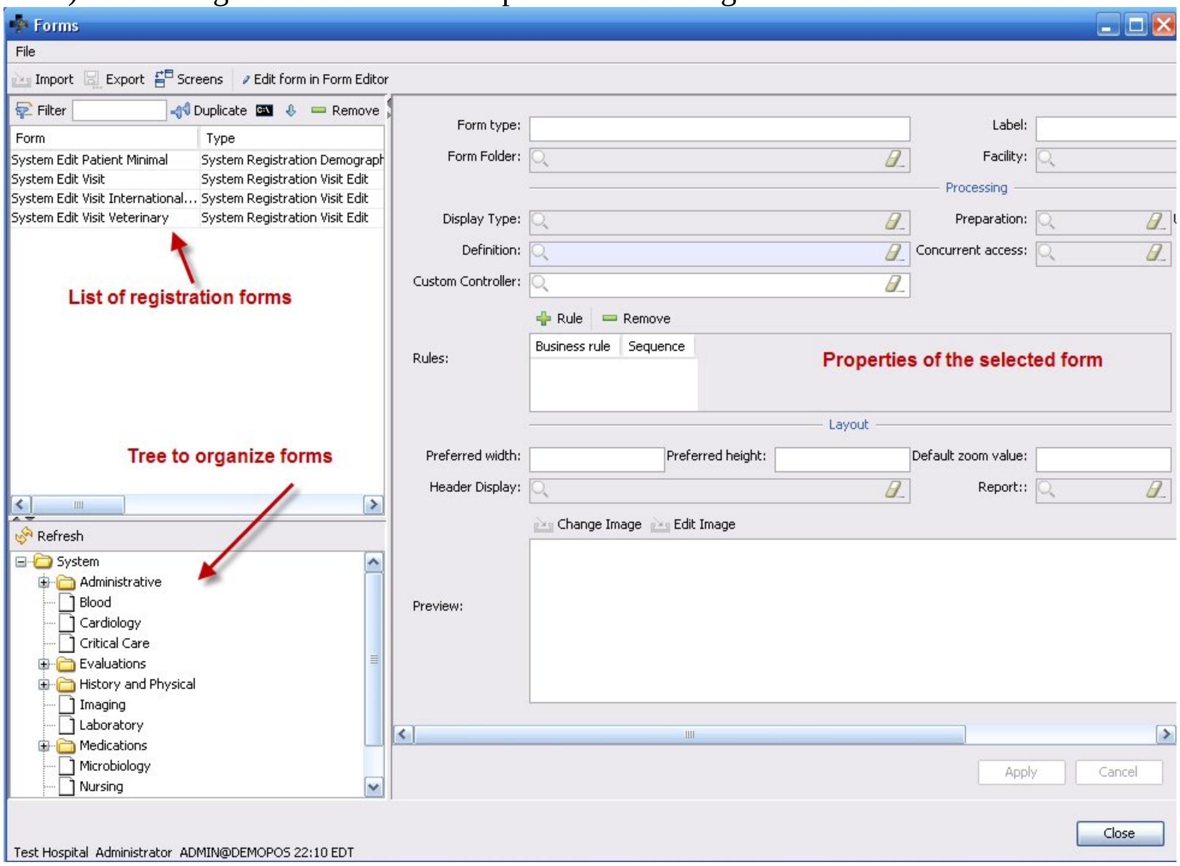


Figure 23 Registration Forms

2) Right click on the tree node to add the form under
3) Select add registration form

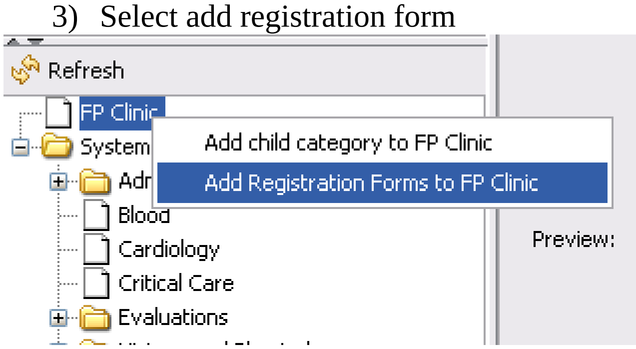
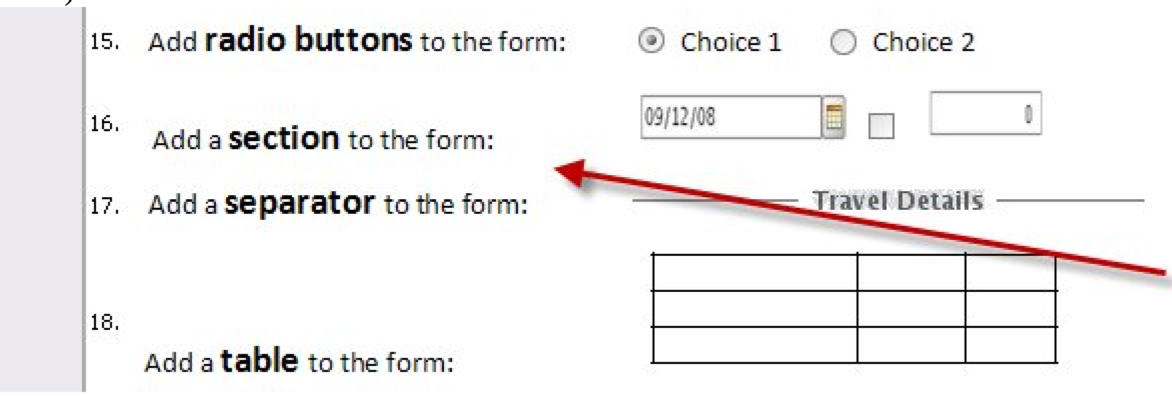


Figure 24 New registration form

4) After entering a uniqueregistration form name (prefix with the facility) the empty form opens.
5) Click Add and click on 16. Section



6) Browse and/or search for the registration form sections added above.

4. Form Editor

The form editor provides a WYSIWYG view of the form being edited with many advanced properties and configuration options available to tailor the form to your needs.

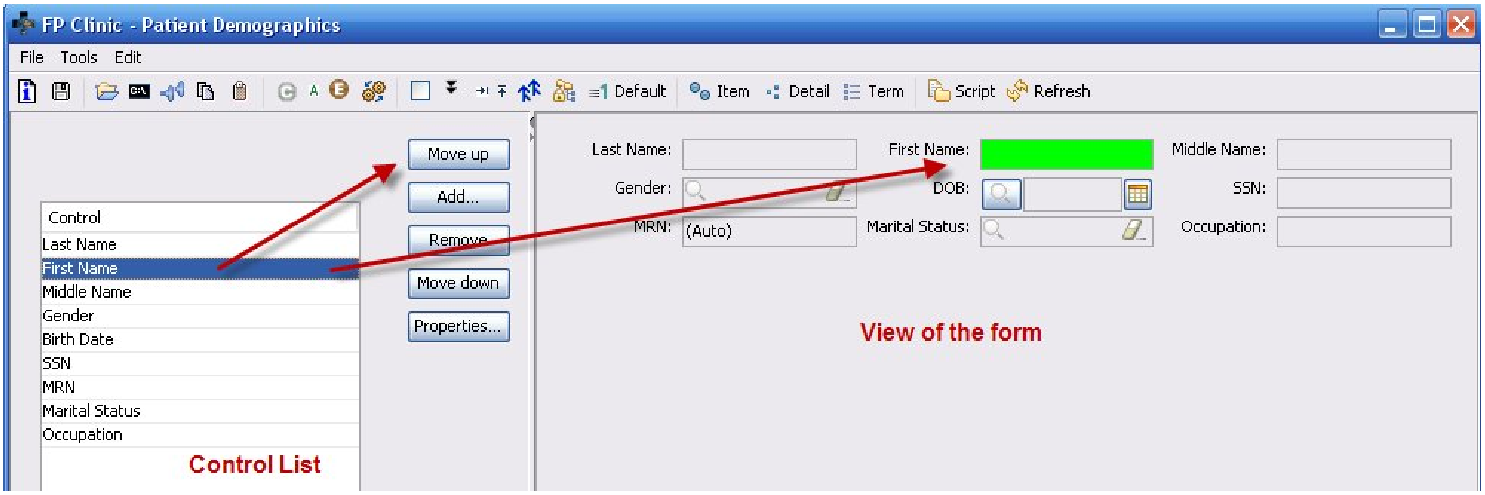


Figure 25 Form Editor

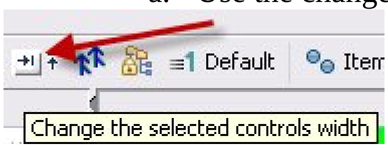
On the left side is the list of controls for the form. On the right side is a relatively accurate display of the form. Most of the controls will work as they will in production with the limitations that there is not a real controller handling events generated by the form.

Selecting a control will activate the Move up/down/properties buttons. At any time you can press Add. Here are the most common actions typically made. On the right the selected control will be highlighted (if the control supports highlighting). Sometimes changing the layout will affect the highlighting of the controls.

4.1 Layout

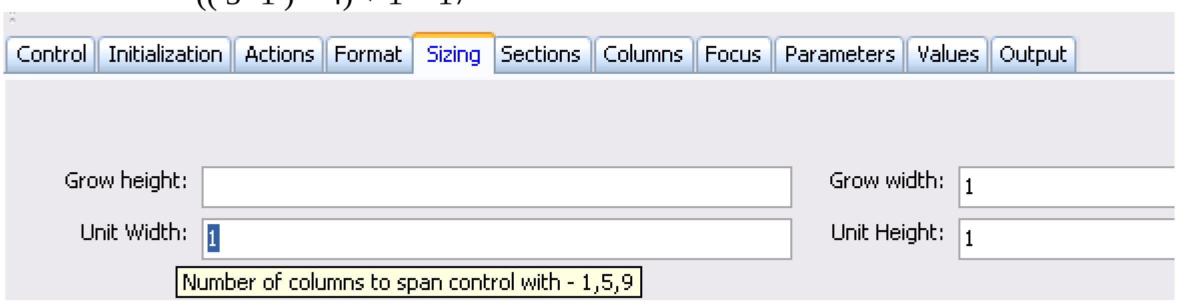
The left side shows the order of the controls from top to bottom as they will be laid out from left to right and top to bottom on the form. For same background information on the Jgoodies library used for form layout see http://www.jgoodies.com/articles/forms.pdf

1) To change the order of a control select it and press Move up or Move down.
2) To remove a control select and press remove (prompted to confirm)
3) To change the width of a control either
    a. Use the change width toolbar button.



    b. Press properties and change the unit width to be 1, 5, or 9 for 1, 2 or 3 columns.

    The value is equal to ((width in columns -1) * 4) + 1
    So for a form defined as 5 columns the value used for a control to span all 5 columns would be ((5 -1) * 4) + 1 = 17



4) To change the height use the toolbar button or change the unit height to be 1 – 7+ where each unit represents a row.
5) To have a control start on a new line see the properties of the control and the format tab for the new line checkbox

Figure 26 Control new line

6) To change the number of columns the form uses press the view properties toolbar button

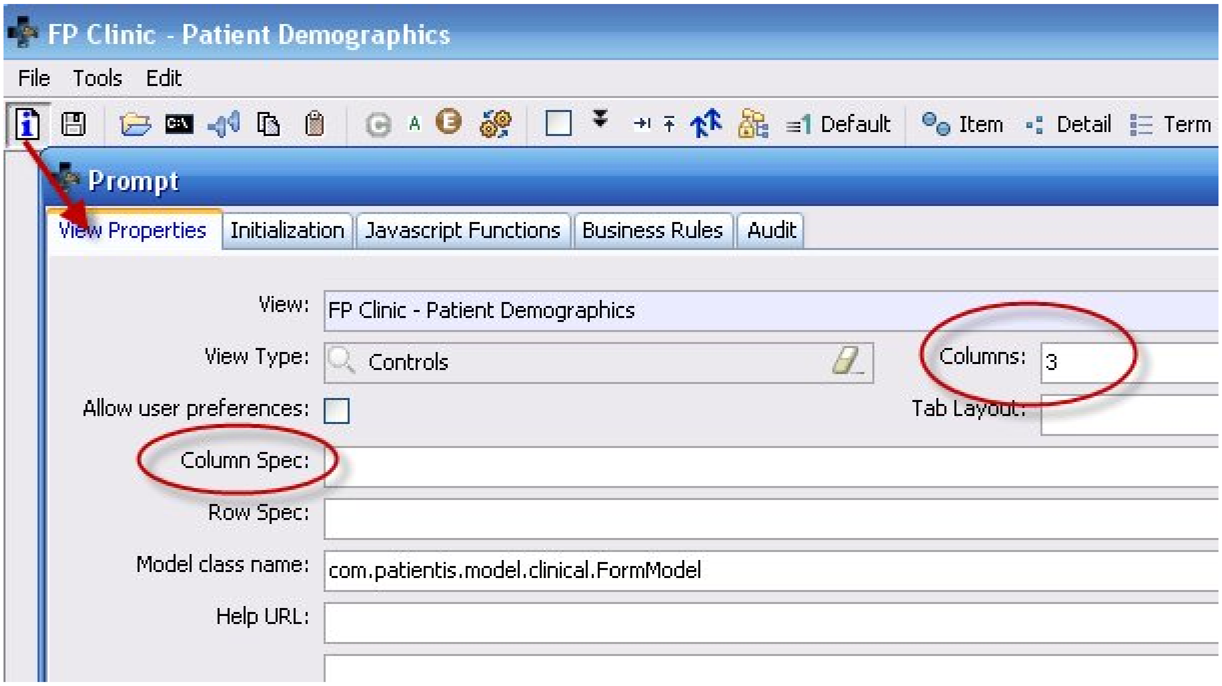


Figure 27 View properties

7) To customize the sizes of the columns and tailor the layout you can optionally provide a custom column specification. A form is laid out in columns.

Figure 28 Form Layout

Column 1 is the space between the edge of the form and the beginning of the label.
Column 2 is the first label.
Column 3 is the space between the label and the first control.
Column 4 is the first control.
Column 5 is the space between the first control and the second label

etc

.

View properties column specification

To customize the layout we define how each columns space is determined. The default specification for 1 column is: 4dlu,right:max(50dlu;p),4dlu, 75dlu:grow(1),4dlu

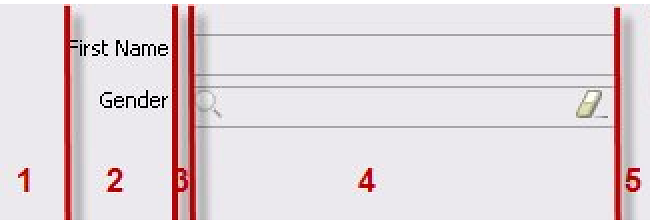


Figure 29 col spec

This means

Column 1: 4dlu 4 units in width
Column 2: 4dlu 50 units in width or the preferred size of the label, whichever is greater
Column 3: 4dlu 4 units in width
Column 4: 4dlu 75 units in width and grow as wide as the form with a weight of 1
(weights only apply for multiple columns with the weights are not all the same value)
Column 5: 4dlu 4 units in width

Here is an example custom column spec. The key points are that the controls do not have labels so we override the label getting much space. And the checkbox and date columns are constrained so they do not grow in width.

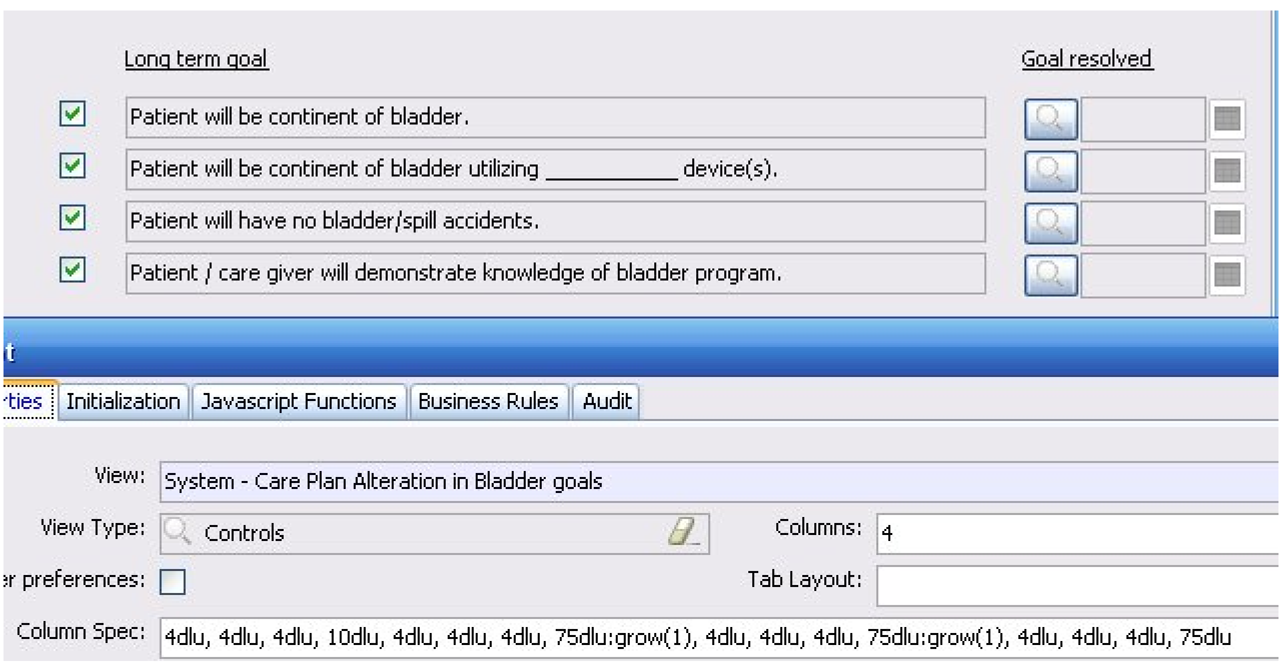


Figure 30 Custom column spec example

4.2 Adding controls

To add a new control in the form editor

1) Select the control you wish to be above the control you are adding
2) Press Add
3) Select the type of control
4) Enter the control properties (see below)
5) Click Next or OK
6) The control is added to the form.
7) If the model value was not a FORM* value then set the base model type to match

For example if you chose the model for PATIENTS_* then you need to select a base model type of ‘Patient’

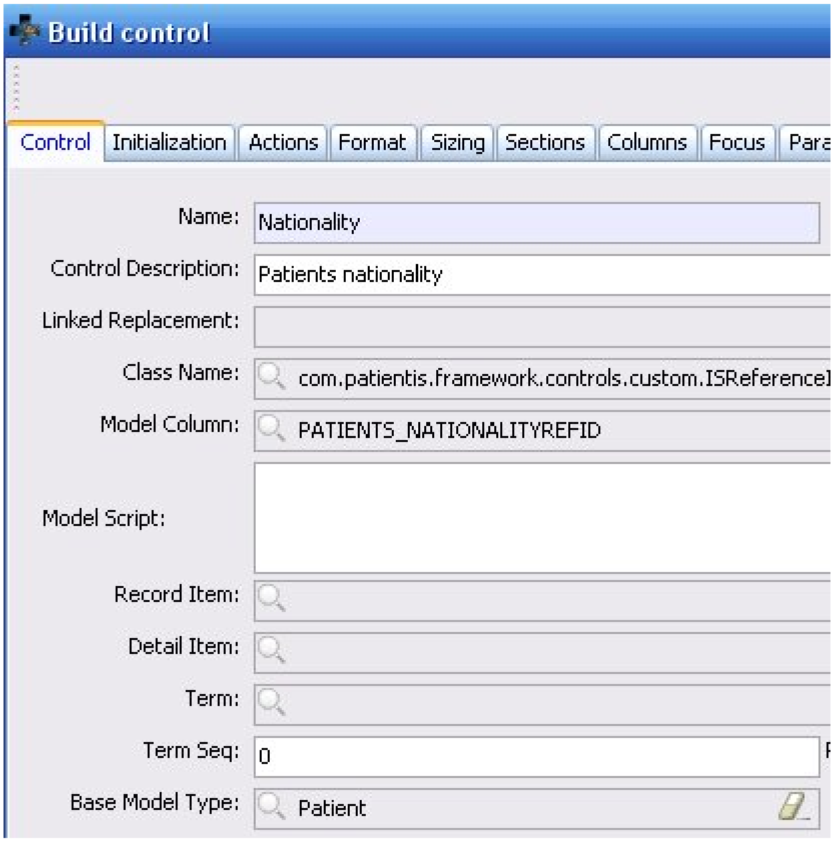


Figure 31 Base Model Type

8)

4.2.1 *Adding a pick list*

1) A pick list allows you to search from a list of values, typically stored as a reference group.

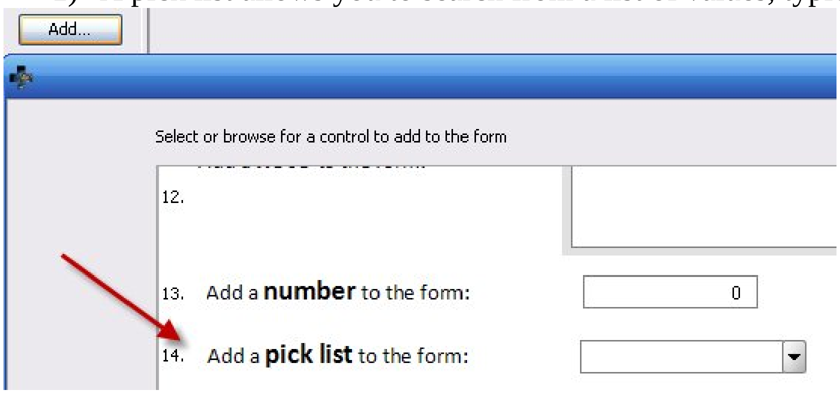


Figure 32 Adding a picklist

2) Enter the label (typically with a colon) for the control
3) Optionally enter a description which will be tool tip text for the label
4) If the field is stored on a table and not a record item or term then change the model value to table/column
5) For nationality it resides on the patients table and so we choose PATIENTS_NATIONALITYREFID
6) The data type of the table/column must be compatible with the control.

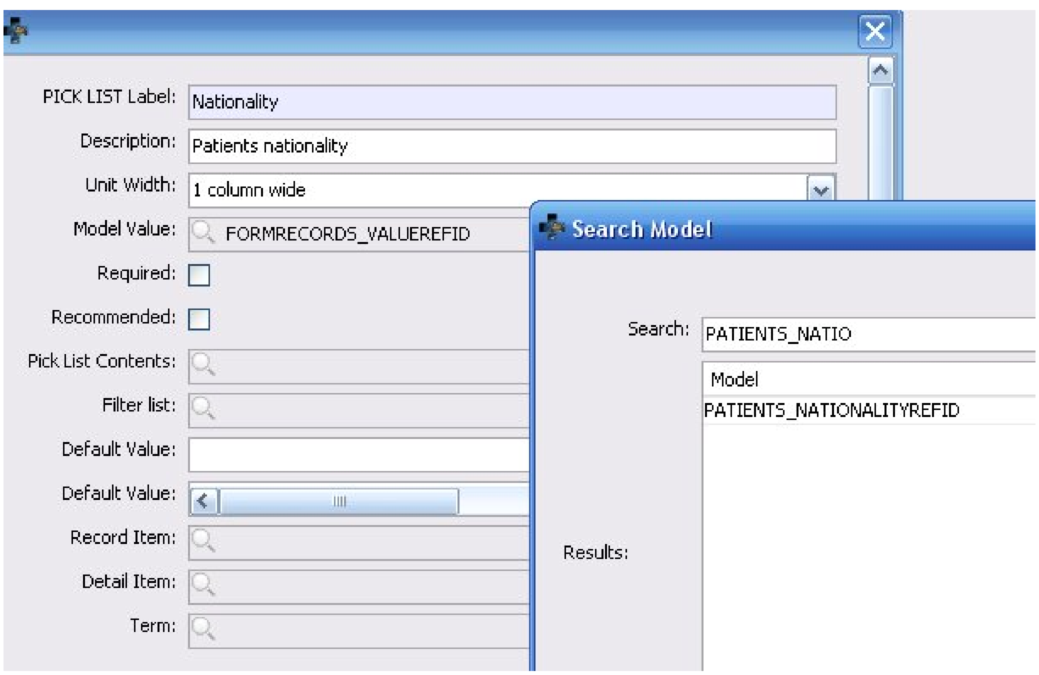


Figure 33 Picklist properties

7) Originally the default was a drop down list but in 0.86 the default is a search control.
8) Click the search for the filter list and choose the reference group e.g. Nationality