

Mae Tao Clinic Laboratory

Laboratory Test Results System: LATRS

Administration training. (v1.2)

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Contents

About LATRS	2
About Administration	3
Administration Home	4
Basic Forms	5
<i>Forms: create a new form</i>	<i>6</i>
<i>Example: HCT Form</i>	<i>8</i>
<i>HCT & Blood Group: limited fields</i>	<i>14</i>
Complex Forms	21
<i>Subfields</i>	<i>22</i>
<i>Copying fields</i>	<i>25</i>
<i>Subtests</i>	<i>29</i>
<i>Grouping fields together</i>	<i>30</i>
Patients, Departments and Staff	32
Data Export	33

About LATRS

LATRS is a new application to store laboratory test results. It has been built especially for use at the Mae Tao Clinic Laboratory. LATRS can store **any** sort of test results, and report on them. LATRS will make reporting of test results much quicker and easier.

LATRS can be accessed from any computer connected to the Mae Tao Clinic network. To access the system, visit:

<http://192.168.1.20:3000>

For training, a practice version of the system will be used. This system is available at:

<http://192.168.1.20:3030>

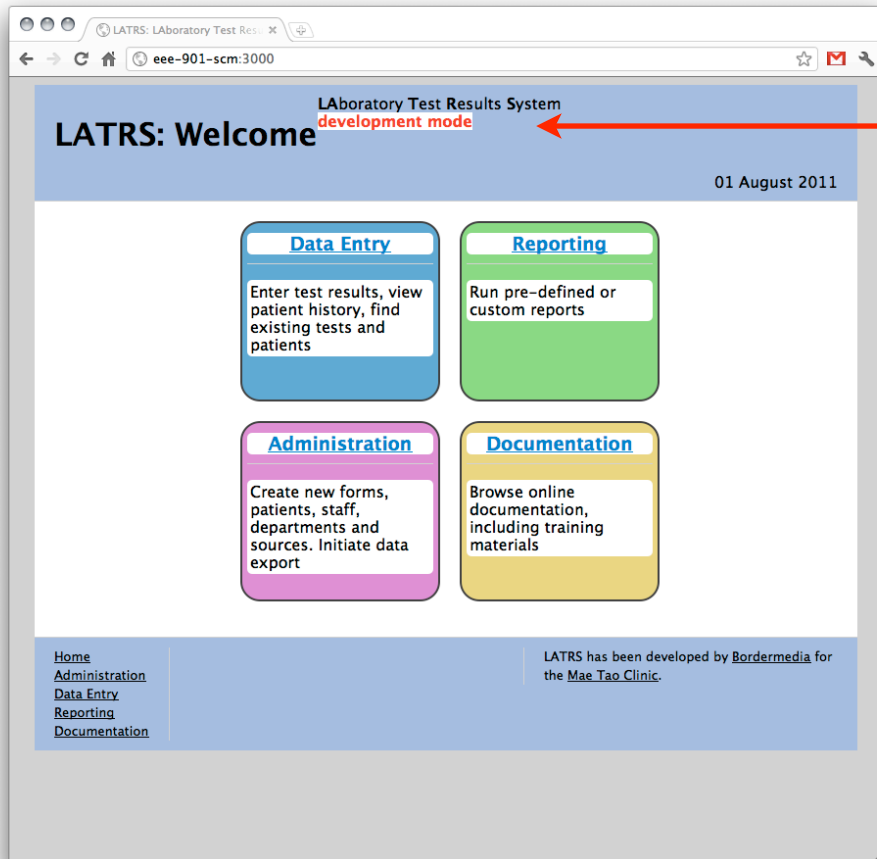
LATRS works best in the Google Chrome browser, or the Firefox browser. There are problems using the Internet Explorer browser. Please always use Google Chrome or Firefox!



About Administration

Administration is just one part of the LATRS system. It is where you can:

- Define new forms for data entry
- Export data to Microsoft Excel
- Manage staff, patients and departments



This only appears on the training system

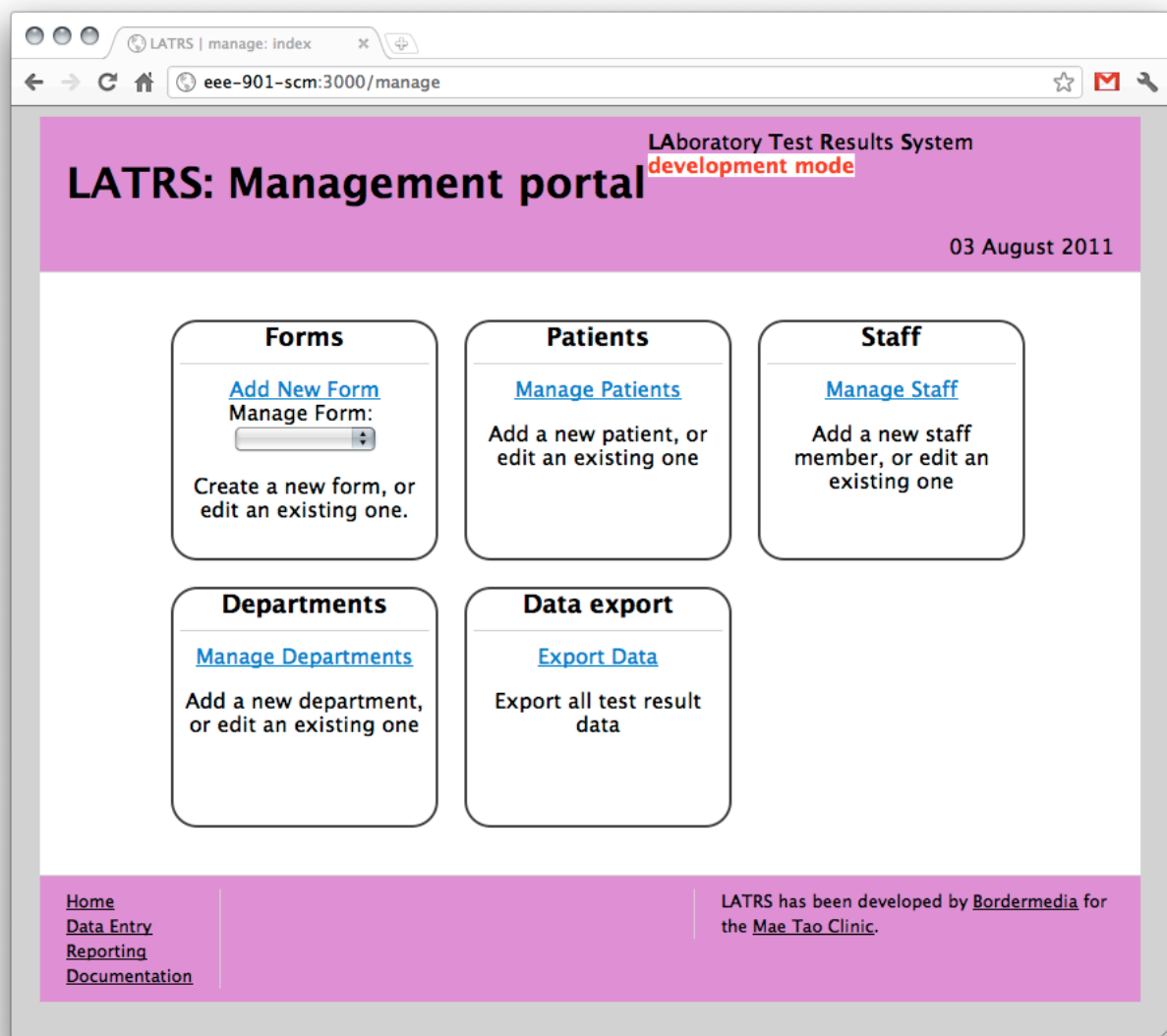
Administration Home

There are 5 parts to the Administration section.

Forms lets you describe the sort of information you need to store for each Lab test.

Patients, **Staff** and **Departments** let you create, edit or delete each type from the lists shown in **Data Entry**.

Data Export lets you save all LATRS information as a Microsoft Excel spreadsheet, or XML.



Basic Forms

For people to be able to enter data into LATRS, we need to **describe** what pieces of information we need to store. Without a form, no data can be entered into the system!

The image shows a screenshot of an email composition window. At the top, there are buttons for 'Send', 'Save Now', and 'Discard'. Below these, the 'From' field is populated with 'Steven McPhillips <steven.mcphillips@gmail.com>'. The 'To' field is empty and has an arrow pointing to it. Below the 'To' field are links for 'Add Cc' and 'Add Bcc'. The 'Subject' field is empty and has an arrow pointing to it. Below the 'Subject' field is a toolbar with icons for 'Attach a file', 'Insert: Invitation', and various text formatting options (bold, italic, underline, strikethrough, text color, background color, link, unlink, list, quote, indent, outdent, align left, align center, align right, justify). The 'Body' field is a large text area and has an arrow pointing to it. At the bottom, there are buttons for 'Send', 'Save Now', and 'Discard', along with a 'Check Spelling' dropdown menu.

Example form: Sending an Email

An Email is created using a Form, and has 3 main fields:

- To (the person or people we are sending the Email to)
- Subject (what the email is about)
- Body (the actual message)

In LATRS, our Forms aren't for sending Email. They are for recording test results.

Forms: create a new form

Forms

[Add New Form](#)
Manage Form:

Create a new form, or
edit an existing one.

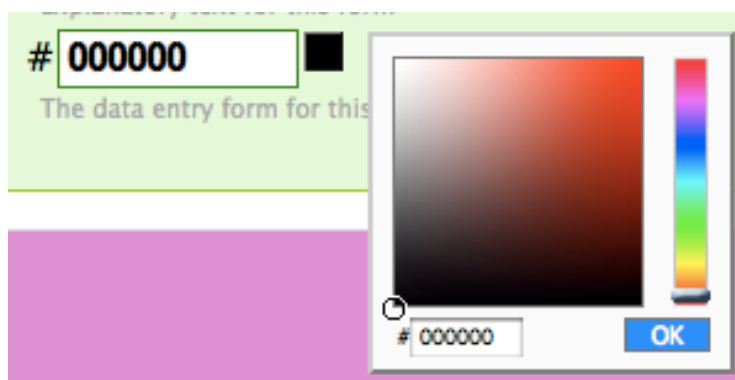
To create a new form, first click the “Add New Form” link.

All Forms in LATRS have 3 basic **attributes**, or pieces of information:

- Name (identifies the form)
- Description (describes what the form is used for)
- Colour (provides a colour for the form to be displayed with)

The screenshot shows a web browser window with the URL `eee-901-scm:3000/manage/templates/new`. The page has a purple header with the text "LATRS: Management portal" and "Laboratory Test Results System development mode". The date "03 August 2011" is displayed in the top right. The main content area is green and titled "Create Forms". It contains three input fields: "Form Name" (with a small text box below it saying "The name of the form"), "Description" (with a large text box below it), and "Colour" (with a color picker showing "#000000" and a small text box below it saying "The data entry form for this test will be this colour"). At the bottom of the form are "Save" and "Cancel" buttons. The footer is purple and contains links for "Home", "Data Entry", "Reporting", and "Documentation". It also states "LATRS has been developed by Bordermedia for the Mae Tao Clinic."

To choose a colour, click the square to the right of the colour field, and click on the colour you want to use. Click “OK” to return to the main form:



Example: HCT Form

Let's make a simple form to store information from an HCT test.

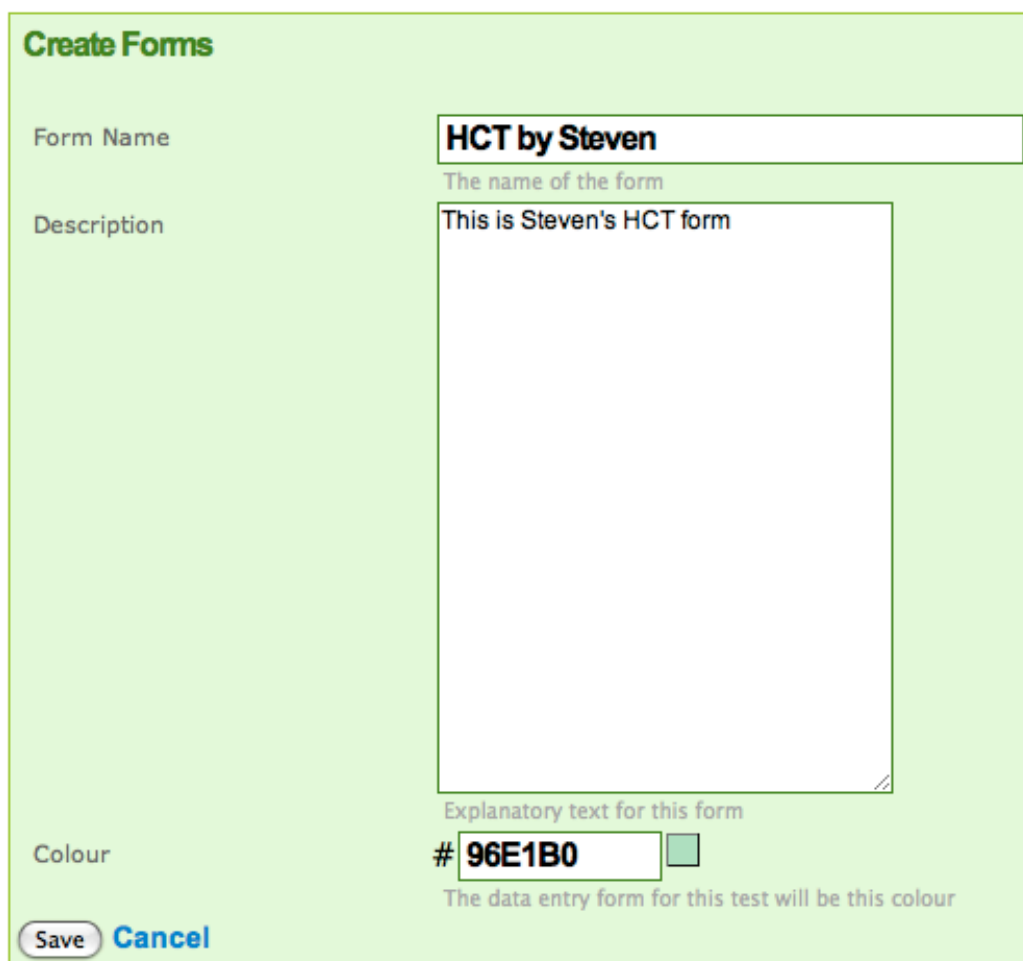
We will need 1 field to store this information: **HCT Value**.

What do we know about the type of information that goes into this field?

- Is it a number, or text?
- Is it required? That is, is the test result meaningful without it?

HCT Value is a **percentage**, and holds a **number**. It is a **required** field.

Now, let's create our form. Add a new form, and call it "HCT by [your name]". Mine will be "HCT by Steven"



The screenshot shows a 'Create Forms' interface with a light green background. On the left, there are labels for 'Form Name' and 'Description'. To the right of 'Form Name' is a text input field containing 'HCT by Steven'. Below this, a smaller text input field contains 'This is Steven's HCT form'. At the bottom left, there is a 'Colour' label and a color selection field showing '# 96E1B0' next to a small teal color swatch. Below the color field, there is a small explanatory text: 'The data entry form for this test will be this colour'. At the bottom left, there are two buttons: 'Save' and 'Cancel'.

When you are ready, click the **save** button

You should now see a screen like this

This is the link to the preview box

Manage Form [Preview](#) (opens in new window)

Form Name HCT by Steven ① The name of the form

Description This is Steven's HCT form ① Explanatory text for this form

Status Inactive ① If selected, this form will be available for people to use

Colour #8CFF5A ① The data entry form for this test will be this colour

Form Fields ➕ Add Group ① Fields to be shown in the form

Group	Description	Fields
Created HCT by Steven		
_default	This is the default group. It will always be displayed at the top of the form, and cannot be deleted	[empty] Fields Delete

Sub-tests ➕ Add Sub-test ① These forms will be displayed upon completion of this form, pre-populated with patient, staff and department data

Sub-test
Created HCT by Steven

No Entries

[Close](#) [Delete](#)

Click the **Preview** link, and you can see what the form will look like. You can do this at any time.

HCT by Steven

? **This is a preview of the form**
This is Steven's HCT form

Basic information
Patient RN

Department

Staff

Time in

Time out

Patient Details [\[refresh\]](#)
Enter the patient's RN to retrieve details

? Can't find the right patient? [Create the patient](#)

Test data

For our form to be of any use, we need to add our field. Halfway down the page, there is the **Form fields** section:

Form Fields

Add Group

Fields to be shown in the form

Group	Description	Fields		
Created HCT by Steven				
_default	This is the default group. It will always be displayed at the top of the form, and cannot be deleted	[empty]	Fields	Delete

Fields are put into **Groups**. Groups are a way to split up lots of fields, making it easier for the data entry people to complete the form. For most forms, we will use the default group.

To add fields into a group, click the **Add Field** link next to that group:

Group	Description	Fields		
_default	This is the default group. It will always be displayed at the top of the form, and cannot be deleted	[empty]	Fields	Delete
			<div><div><div></div></div></div> Add Field	<div><div></div></div>
Field	Subfield	Limits		
No Entries				

There is a lot of information to describe a field:

Create Form Fields [X]

Field
[Text Input]
The name of this form field

Unit label
[Text Input]
Some fields should have a unit of measurement label; this will be displayed after the field. Eg. HCT Value: 55% ('%' is the label)

Required field?
☐
Data for a required field must be provided for the test result to be saved

Type
[Text] [Dropdown Arrow]
If this field holds number data, use the 'Number' type. Otherwise, use the 'Text' type. This influences reporting

Limits (Hide)
Value: [Text Input] Default option?: ☐
This will become a selectable option for the form field This will make this option the default selection for the form field
[Create Another Limit]

Multiple selection? ☐
Can this field have multiple values?

[Save] [Cancel]

Remember:

- Our field **name** is **HCT Value**
- Our field will store a percentage, so add a % label to it
- Our field is **required**
- Our field will store **numbers**. Set it's **type** to **Number**

You should have something that looks like this:

Create Form Fields ✕

Field

The name of this form field

Unit label

Some fields should have a unit of measurement label; this will be displayed after the field. Eg. HCT Value: 55% ('%' is the label)

Required field?
☒
Data for a required field must be provided for the test result to be saved

Type

Number ⬆⬇⬆⬇

If this field holds number data, use the 'Number' type. Otherwise, use the 'Text' type. This influences reporting

Limits (Hide)

Value

This will become a selectable option for the form field

Default option?
☐
This will make this option the default selection for the form field

[Create Another Limit](#)

Multiple selection? ☐
Can this field have multiple values?

[Save](#) [Cancel](#)

Save this field, and you should see it listed:

			+ Add Field ✕						
Field	Subfield	Limits							
HCT Value	-	-	Limits	Subfields	Edit	Copy	Move	Delete	

The field is listed in **red** because it is required.

Preview the form again, and see if it looks correct.

Before the form can be used, it must be **activated**. Do this by setting its **status**:



The 'Manage Form' dialog box has a light green background. At the top right, there is a link 'Preview (opens in new window)'. Below the title, there are four fields: 'Form Name' with the value 'HCT by Steven', 'Description' with the value 'This is Steven's HCT form', 'Status' with the value 'Inactive', and 'Colour' with a green square icon and the hex code '#8CFF5A'. A red arrow points to the 'Inactive' status text.

To change that status, click the text, select the new value, then click **save**:

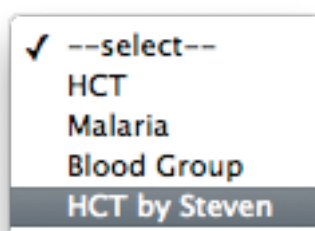


A close-up of the 'Status' field. It shows a dropdown menu with 'Active' selected. To the right of the dropdown are two buttons: 'Save' and 'Cancel'.

Tests are **inactive** to start. This lets you set up the form completely before anyone can start using it for data entry.

If you ever need to change an existing active form, you should **deactivate** it first, then **activate** it once you have finished making your changes.

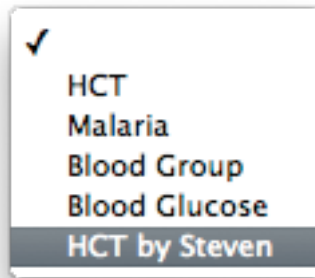
Congratulations! you have just created your first form. It can now be used for data entry. To test, go to the **Data Entry** section, and it should be listed as a test to create:



A dropdown menu with a white background and a grey shadow. It has a checkmark icon next to the selected item 'HCT by Steven'. The other items in the list are '--select--', 'HCT', 'Malaria', and 'Blood Group'.

HCT & Blood Group: limited fields

Let's look at creating some different types of fields. Go back to the **Administration** section, and select your form to edit:



Let's change this form to store **Blood Group** information as well as the HCT Value. To begin, we should update the form's name.

Change the name to **HCT & Blood Group by [your name]**. To edit this, just click the text, make your changes and click the **save** button:

Now, let's think about blood groups. What do we know about them?

- Are they numbers, or text?
- Are their a limited number of types?
- Is there any other information that is important to "Blood Group" other than the type?

The blood group field:

- Stores **text**, not numbers
- Can have the values:
 - A
 - B
 - O
 - AB
- Can only have 1 value
- Is a **required** field
- Has no **label**

So let's create the field. Add a new field to the default group again:

Create Form Fields X

Field

The name of this form field

Unit label

Some fields should have a unit of measurement label; this will be displayed after the field. Eg. HCT Value: 55% ('%' is the label)

Required field?
☐
Data for a required field must be provided for the test result to be saved

Type
Text ⬆
If this field holds number data, use the 'Number' type. Otherwise, use the 'Text' type. This influences reporting

Limits (Hide)
Value
This will become a selectable option for the form field
Default option? ☐
This will make this option the default selection for the form field

Multiple selection? ☐
Can this field have multiple values?

To make the field a selection list, we need to add **limits** to the field:

Limits (Hide)
Value
This will become a selectable option for the form field
Default option? ☐
This will make this option the default selection for the form field

To add more than one limit, click the **Create Another Limit** button, which makes more text boxes to fill out. We don't want any of these values to be set automatically, so don't make any of them the **default option**.

Create limits of **A**, **B**, **AB** and **O**:

Create Form Fields ✕

Field

Blood Group

The name of this form field

Unit label

Some fields should have a unit of measurement label; this will be displayed after the field. Eg. HCT Value: 55% ('%' is the label)

Required field?

☒

Data for a required field must be provided for the test result to be saved

Type

Text

If this field holds number data, use the 'Number' type. Otherwise, use the 'Text' type. This influences reporting

Limits (Hide)

Value	Default option?
<div>A</div> <p>This will become a selectable option for the form field</p>	<div><input type="checkbox"/></div> <p>This will make this option the default selection for the form field</p>
<div>B</div> <p>This will become a selectable option for the form field</p>	<div><input type="checkbox"/></div> <p>This will make this option the default selection for the form field ✕</p>
<div>AB</div> <p>This will become a selectable option for the form field</p>	<div><input type="checkbox"/></div> <p>This will make this option the default selection for the form field ✕</p>
<div>O</div> <p>This will become a selectable option for the form field</p>	<div><input type="checkbox"/></div> <p>This will make this option the default selection for the form field ✕</p>

Create Another Limit

Multiple selection? ☐ Can this field have multiple values?

Save Cancel

And now save the field:

			+ Add Field X					
Field	Subfield	Limits						
HCT Value	-	-	Limits	Subfields	Edit	Copy	Move	Delete
Blood Group	-	A B AB O	Limits	Subfields	Edit	Copy	Move	Delete

Oops! I forgot to add some limits. We are missing A-, B-, AB- and O-. To add them, click the **Limits** link next to Blood Group:

			+ Add Field X					
Field	Subfield	Limits						
HCT Value	-	-	Limits	Subfields	Edit	Copy	Move	Delete
Blood Group	-	A B AB O	Limits	Subfields	Edit	Copy	Move	Delete

Limits for Blood Group			+ Add Limit X	
Value	Default option?			
A	<input type="checkbox"/>		Delete	
B	<input type="checkbox"/>		Delete	
AB	<input type="checkbox"/>		Delete	
O	<input type="checkbox"/>		Delete	

We will need to add 3 limits. Do this by clicking the **Add Limit** link, and creating limits for **A-**, **B-** **AB-** and **O-**. Once done, the limits should look like this:

Limits for Blood Group			+ Add Limit X	
Value	Default option?			
A	<input type="checkbox"/>		Delete	
B	<input type="checkbox"/>		Delete	
AB	<input type="checkbox"/>		Delete	
O	<input type="checkbox"/>		Delete	
A-	<input type="checkbox"/>		Delete	
B-	<input type="checkbox"/>		Delete	
AB-	<input type="checkbox"/>		Delete	
O-	<input type="checkbox"/>		Delete	

The order of these limits here will be the same as the order they are shown in the actual form.

To change the order, move the mouse over the name of the value, then move it just to the right, until the cursor changes to this:



Hold the mouse button down, then drag the limit to the correct position. Change the order so it is like this:

- O
- O-
- A
- A-
- B
- B-
- AB
- AB-

Value	Default option?	
O	<input type="checkbox"/>	Delete
O-	<input type="checkbox"/>	Delete
A	<input type="checkbox"/>	Delete
A-	<input type="checkbox"/>	Delete
B	<input type="checkbox"/>	Delete
B-	<input type="checkbox"/>	Delete
AB	<input type="checkbox"/>	Delete
AB-	<input type="checkbox"/>	Delete

If you can't move something, reload the page. Sometimes the browser gets "stuck"...

To change the name of a limit, click its name and update it, just like we did for the form name. Try it out, but just cancel, instead of saving.

Value	Default option?	
<input type="text" value="O"/>	<input type="checkbox"/>	Delete

Save Cancel

Close the limits box now. Use the green cross in the right corner to do this.

We can change the order of fields in same way. Move **HCT Value** underneath **Blood Group**:

Form Fields + Add Group

Group	Description	Fields	Fields	Delete
_default	This is the default group. It will always be displayed at the top of the form, and cannot be deleted	HCT Value, Blood Group		

+ Add Field X

Field	Subfield	Limits	Limits	Subfields	Edit	Copy	Move	Delete
Blood Group	-	O O- A A- B B- AB AB-						
HCT Value	-	-						

Preview the form to see what it looks like.

Imagine it was possible for a patient to have more than one blood type. We can change the field to accept multiple values. Edit the **Blood Group** field by clicking the **edit** link:

Save Blood Group X

Field

Blood Group
The name of this form field

Unit label

Some fields should have a unit of measurement label; this will be displayed after the field. Eg. HCT Value: 55% ('%' is the label)

Required field?

☒

Data for a required field must be provided for the test result to be saved

Type

Text ↑ ↓

If this field holds number data, use the 'Number' type. Otherwise, use the 'Text' type. This influences reporting

Multiple selection? ☐

Can this field have multiple values?

Save Cancel

Check the **Multiple selection?** box, and save. Now preview the form again.

Test data

Blood Group

- O
- O-
- A
- A-
- B
- B-
- AB
- AB-

That is a bit silly, so lets change it back. Edit the field and uncheck the **multiple selection** box.

Complex Forms

So far we have looked at some basic types of fields. Sometimes the test being performed requires more complex fields to capture the information.

Consider the Malaria test. The test itself can be **Negative** or **Positive**. Positive tests need to record the strains or Malaria found, and their strength. Each strain can be in stages, and strong levels also require an **RBC Infection** value.

This is too much information to fit into a single field. Luckily, we can create **subfields**.

Let's create a sample Malaria test. Call it **Malaria by [your name]**, and add a **PV field**, with limits of:

- Rare
- +
- ++
- +++
- ++++

PV is not a required field, so it doesn't display in red text:

The screenshot shows the 'Form Fields' editor interface. At the top, there's a table with columns 'Group', 'Description', and 'Fields'. The first row is for the '_default' group, which is always displayed at the top and cannot be deleted. Below this, there's a section for adding fields. A 'PV' field has been added, and its limits are being configured. The 'Limits for PV' section shows a table with columns 'Value' and 'Default option?'. The values are 'Rare', '+', '++', '+++', and '++++'. Each value has a checkbox for 'Default option?'. There are also 'Delete' buttons for each value. The interface includes buttons for 'Add Group', 'Add Field', and 'Add Limit'.

Group	Description	Fields
_default	This is the default group. It will always be displayed at the top of the form, and cannot be deleted	HCT Value, Blood Group

Field	Subfield	Limits
PV	-	-

Value	Default option?
Rare	<input type="checkbox"/>
+	<input type="checkbox"/>
++	<input type="checkbox"/>
+++	<input type="checkbox"/>
++++	<input type="checkbox"/>

Close the **limits** for PV by clicking the green box to the right.

Subfields

Subfields are just like normal fields, except they belong to another field.

We want to create 2 **subfields** for PV:

- Stage
- RBC Infection

Stage has limits of **s**, **t** and **g**, and can have multiple values. It is not required

RBC Infection is a **percentage**, so give it a label of **%**. It stores **numbers**, and is not required. It has no limits.

To create these subfields, click the **subfields** link next to the PV field, and add them, just like you would a normal field.

You should have something like this:

Field	Subfield	Limits						
PV	<ul style="list-style-type: none">• Stage• RBC Infection	Rare + ++ +++ ++++	Limits	Subfields	Edit	Copy	Move	Delete
<div><div>+</div> Add Field <div>x</div></div>								
Field	Subfield	Limits						
Stage	-	s t g	Limits	Subfields	Edit	Copy	Move	Delete
RBC Infection	-	-	Limits	Subfields	Edit	Copy	Move	Delete

With subfields, there is extra information we can supply. This will change the way the form displays these fields. Edit the **RBC Infection** subfield, and you will see these new options:

Parent display limit
(upper)

-select-

Only display when the parent field value is lower than this

Parent display limit
(lower)

-select-

Only display when the parent field value is higher than this

Subfield display rule

Inline with parent

Display subfield alongside parent, or underneath in a list?

The **parent display limit** lets us show this subfield only when the **parent** field (in this case, **PV**) is inside a certain value.

We only want to display RBC Infection when the PV value is **+++** or **++++**. Set the **upper** limit to **++++** and the **lower** limit to **+++**:

Parent display limit
(upper)

++++

Only display when the parent field value is lower than this

Parent display limit
(lower)

+++

Only display when the parent field value is higher than this

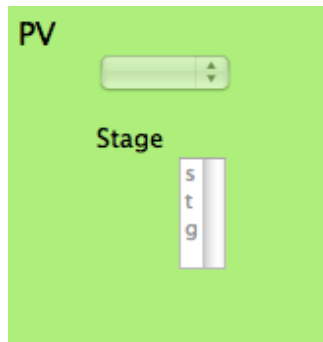
We can also decide to display the subfield next to the parent field, or underneath. Try setting both subfields to **Listed underneath parent**:

Subfield display rule

Listed underneath parent

Display subfield alongside parent, or underneath in a list?

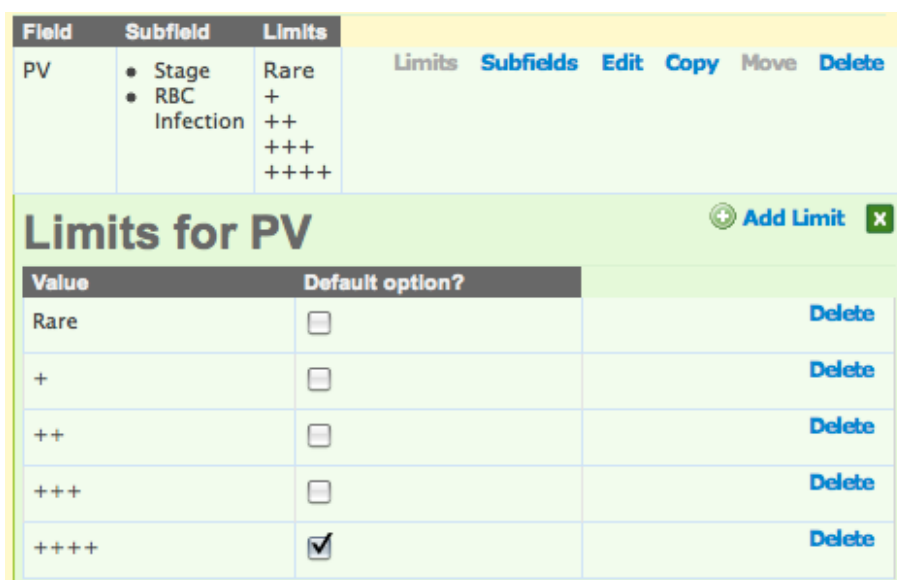
Once you have done this, preview the form. It should look like this:



The image shows a form preview with a green background. At the top, there is a label 'PV' followed by a dropdown menu. Below this, there is a label 'Stage' followed by a vertical dropdown menu with the letters 's', 't', and 'g' visible.

Where is the **RBC Infection** subfield? Remember that we set a display limit on this. It won't show unless the **PV** value is **+++** or **++++**.

Edit the **PV** field, and set its default limit to **++++**:



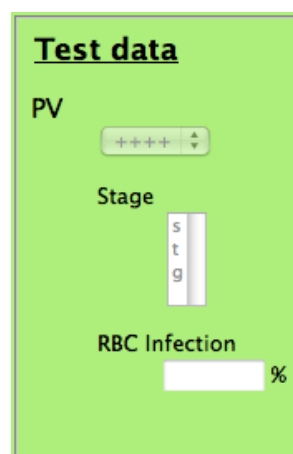
The image shows a configuration window titled 'Limits for PV'. It has a table with columns 'Field', 'Subfield', and 'Limits'. The 'PV' field is selected, and its limits are listed: Rare, +, ++, +++, and +++++. The '+++++' limit is selected as the default option. Below the table, there is a section for 'Limits for PV' with a table of values and their default options. The '+++++' value is checked as the default option.

Field	Subfield	Limits
PV	• Stage • RBC Infection	Rare + ++ +++ ++++ +++++

Limits for PV ⊕ Add Limit ✕

Value	Default option?	
Rare	<input type="checkbox"/>	Delete
+	<input type="checkbox"/>	Delete
++	<input type="checkbox"/>	Delete
+++	<input type="checkbox"/>	Delete
++++	<input type="checkbox"/>	Delete
+++++	<input checked="" type="checkbox"/>	Delete

Now preview the form again:



The image shows a form preview with a green background. At the top, there is a label 'PV' followed by a dropdown menu showing '+++++'. Below this, there is a label 'Stage' followed by a vertical dropdown menu with the letters 's', 't', and 'g' visible. Below that, there is a label 'RBC Infection' followed by a text input field and a percentage sign.

Good, that's working! Now, go back and remove the **default option** from the **+++++** limit. Also, change the subfield to display **inline with parent**.

Copying fields

The Malaria test has 4 strains:

- PV
- PF
- PM
- PO

And they all have the same settings. Once we have create one field, we can copy it. This will copy all of its subfields and limits as well.

Make **3 copies** of the PV field by clicking the **copy** link next to it. You should have something like this:

Add Field X						
Field	Subfield	Limits	Limits	Subfields	Edit	Copy
PV	• Stage • RBC Infection	Rare + ++ +++ ++++				
PV (copy)	• Stage • RBC Infection	Rare + ++ +++ ++++				
PV (copy)	• Stage • RBC Infection	Rare + ++ +++ ++++				
PV (copy)	• Stage • RBC Infection	Rare + ++ +++ ++++				

Edit the 3 copies, and change the names to **PF**, **PM** and **PO**:

			+ Add Field x						
Field	Subfield	Limits	Limits	Subfields	Edit	Copy	Move	Delete	
PV	<ul style="list-style-type: none"> Stage RBC Infection 	Rare + ++ +++ ++++							
PF	<ul style="list-style-type: none"> Stage RBC Infection 	Rare + ++ +++ ++++							
PM	<ul style="list-style-type: none"> Stage RBC Infection 	Rare + ++ +++ ++++							
PO	<ul style="list-style-type: none"> Stage RBC Infection 	Rare + ++ +++ ++++			Edit	Copy	Move	Delete	

The only other field that Malaria requires is one to say whether the test was **Positive** or **Negative**.

Create a field called **Outcome**. It is a **required** field, with limits of **Positive** and **Negative**. We want **Negative** to be the **default option**:

Create Form Fields

Field

Outcome

The name of this form field

Unit label

Some fields should have a unit of measurement label; this will be displayed after the field. Eg. HCT Value: 55% ('%' is the label)

Required field?

☒

Data for a required field must be provided for the test result to be saved

Type

Text

If this field holds number data, use the 'Number' type. Otherwise, use the 'Text' type. This influences reporting

Limits (Hide)

Value

Positive

This will become a selectable option for the form field

Negative

This will become a selectable option for the form field

Default option?

☐

This will make this option the default selection for the form field

☒

This will make this option the default selection for the form field

Create Another Limit

Multiple selection?

☐

Can this field have multiple values?

Save

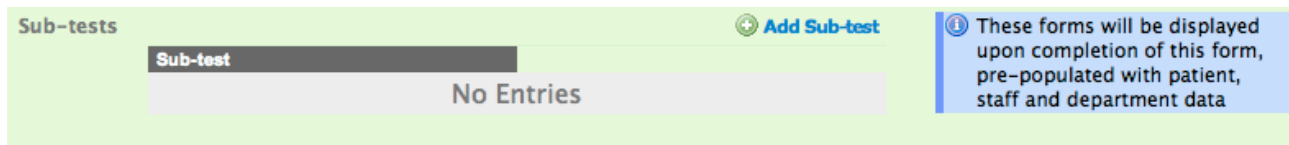
Cancel

Position this field at the top of the list:

Field	Subfield	Limits						
Outcome	-	Positive <u>Negative</u>	Limits	Subfields	Edit	Copy	Move	Delete
PV	<ul style="list-style-type: none"> Stage RBC Infection 	Rare + ++ +++ ++++	Limits	Subfields	Edit	Copy	Move	Delete
PF	<ul style="list-style-type: none"> Stage RBC Infection 	Rare + ++ +++ ++++	Limits	Subfields	Edit	Copy	Move	Delete
PM	<ul style="list-style-type: none"> Stage RBC Infection 	Rare + ++ +++ ++++	Limits	Subfields	Edit	Copy	Move	Delete
PO	<ul style="list-style-type: none"> Stage RBC Infection 	Rare + ++ +++ ++++	Limits	Subfields	Edit	Copy	Move	Delete

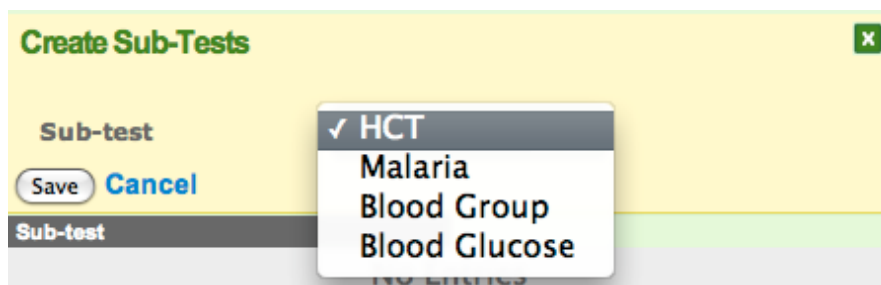
Subtests

All tests can have **subtests** attached to them. This is an easy way to create more than one type of test for a patient at the same time.



The screenshot shows a section titled "Sub-tests" with a green header. On the right, there is a green "+ Add Sub-test" button. Below the header is a table with a single row labeled "Sub-test" and a cell containing "No Entries". To the right of the table is a blue information box with a white "i" icon and the text: "These forms will be displayed upon completion of this form, pre-populated with patient, staff and department data".

To add a subtest, click the **Add Sub-test** link to the right, near the bottom of the page. Then, select the test you want to add.

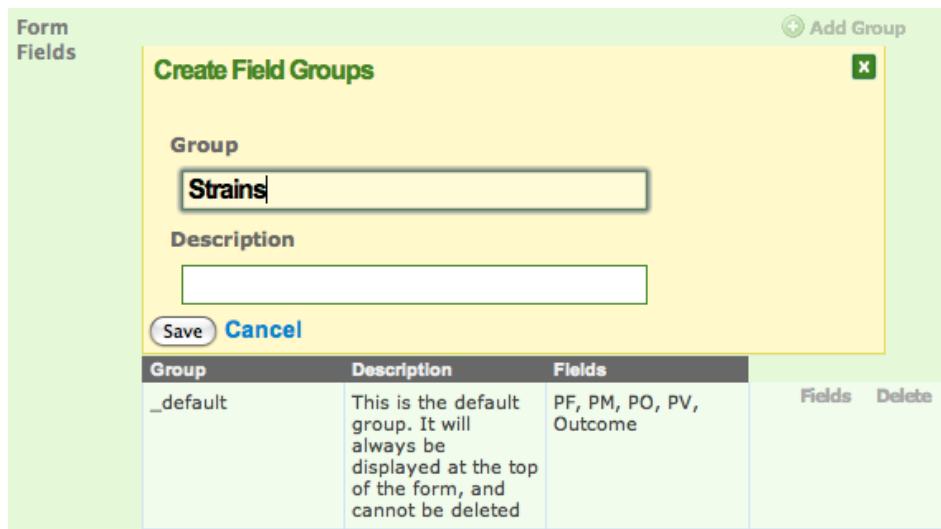


The screenshot shows a "Create Sub-Tests" dialog box with a yellow background and a green "x" close button in the top right corner. It features a "Sub-test" label, a "Save" button, and a "Cancel" button. A dropdown menu is open, showing a list of test options: "✓ HCT", "Malaria", "Blood Group", and "Blood Glucose". Below the dropdown, the text "Sub-test" and "NO ENTRIES" are partially visible.

Grouping fields together

Sometimes, forms will have lots of fields. This can be confusing for the user. We can split fields up into **groups**, each with a name and a description that will make it easier for data entry.

Manage our Malaria form, and create a new Group called **Strains**. This is just like creating a field, but with fewer options:



Form Fields ⊕ Add Group

Create Field Groups ✕

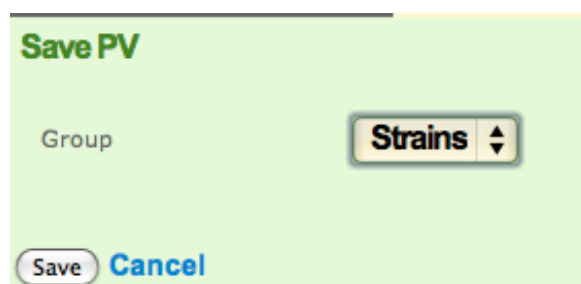
Group

Description

Group	Description	Fields	
_default	This is the default group. It will always be displayed at the top of the form, and cannot be deleted	PF, PM, PO, PV, Outcome	<input type="button" value="Fields"/> <input type="button" value="Delete"/>

We can **create** fields in this new group, or we can **move** fields into this group. Lets move all of the **P** fields into the new **Strains group**. (You will have to close and re-open the fields for all groups first)

PV	<ul style="list-style-type: none">• Stage• RBC Infection	Rare + ++ +++ ++++	Limits Subfields Edit Copy Move Delete
----	---	--------------------------------	--



Save PV

Group Strains

Once all the **P** fields have been moved, preview the form:

Test data

Outcome

Negative

Strains

PV

Stage

s
t
g

PF

Stage

s
t
g

PM

Stage

s
t
g

PO

Stage

s
t
g

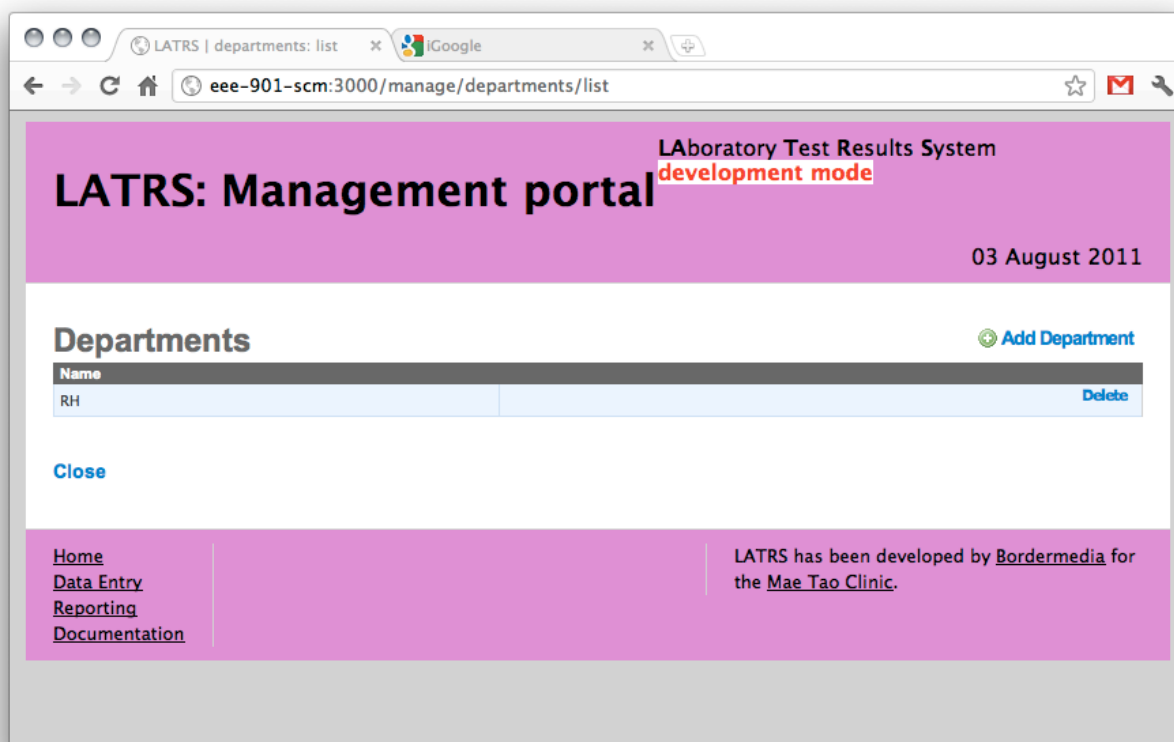
Now, **activate** the form, and it's ready for use!

Patients, Departments and Staff

Test results are linked to **Patients**, **Departments** and **Staff**.

Patients can be created manually from the administration section. However, it is best to let the system retrieve patient information from the **HIS Patient registry** instead. This is an automated process when a patient is selected during data entry.

Departments and Staff are managed the same way. Clicking on the **manage** links from the Administration homepage will retrieve a page like this:



To **edit** existing records, just click the name and make the change:

A form for editing a department record. It features a text input field containing the text 'RH'. To the right of the input field are two buttons: 'Save' and 'Cancel'.

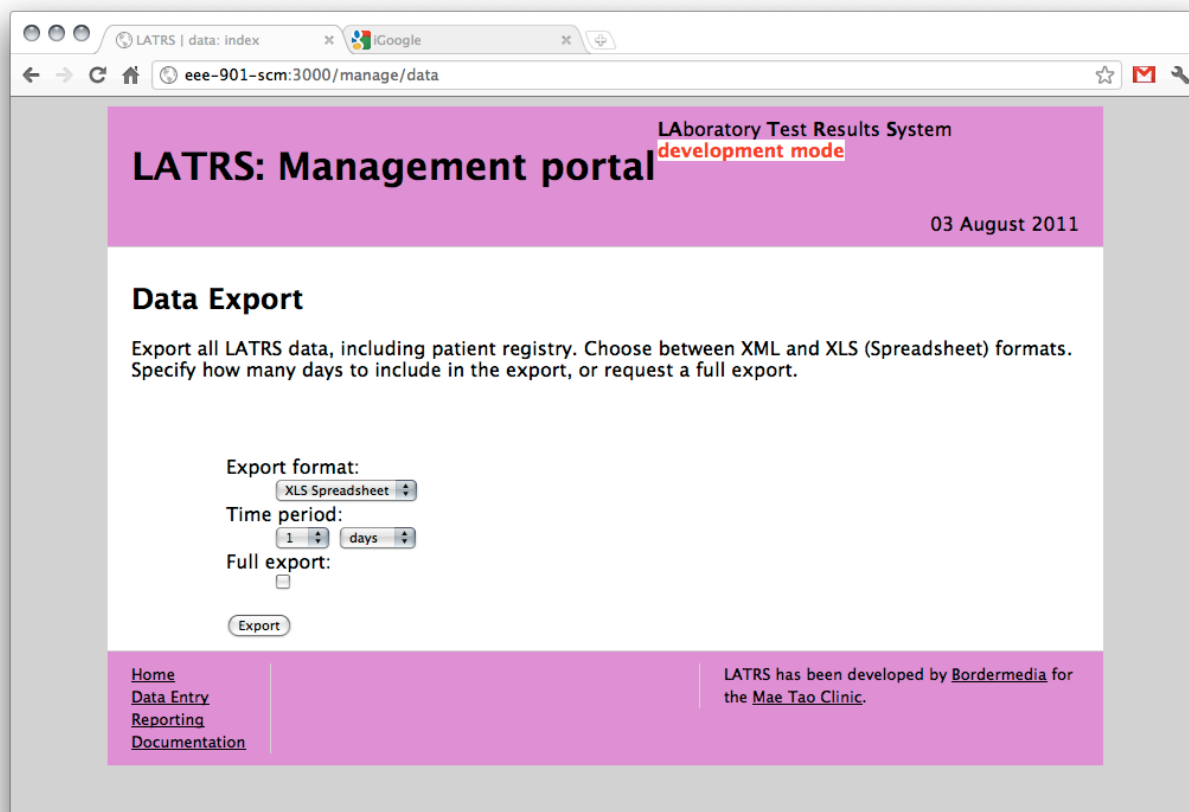
Creating a new record is very easy. Just click the **Add** link to the right:

A form for creating a new department record. It has a title 'Departments' and an 'Add Department' link. Below the title is a section titled 'Create Departments' with a text input field for 'Name'. At the bottom of the section are 'Save' and 'Cancel' buttons.

Data Export

LATRS can export all of its data to an Excel Spreadsheet, or to XML (a computer format). This is useful for getting all of the system data into a format that can be shared with other people, organisations or systems.

Access the data export section from the **Administration** homepage.



The screenshot shows a web browser window with the address bar displaying 'eee-901-scm:3000/manage/data'. The page has a pink header with the text 'LATRS: Management portal' and 'Laboratory Test Results System development mode' in red. The date '03 August 2011' is shown in the top right. The main content area is titled 'Data Export' and contains the following text: 'Export all LATRS data, including patient registry. Choose between XML and XLS (Spreadsheet) formats. Specify how many days to include in the export, or request a full export.'

The form includes the following fields:

- Export format:** A dropdown menu with 'XLS Spreadsheet' selected.
- Time period:** A dropdown menu with '1' selected and 'days' as the unit.
- Full export:** A checkbox that is currently unchecked.
- Export:** A button to submit the form.

The footer of the page is pink and contains a navigation menu on the left with links: [Home](#), [Data Entry](#), [Reporting](#), and [Documentation](#). On the right, it states: 'LATRS has been developed by [Bordermedia](#) for the [Mae Tao Clinic](#)'.

You can export everything, or just the past few days using the form above.

Each type of test (eg: Malaria, CBC) will create a new sheet in the spreadsheet, with all the test results inside. There is another sheet added to the end of the spreadsheet that holds all the patient information the system knows about.