

OpenMRS 2.0 User Interface Redesign

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Goals

- Build a **cool** and **effective** user interface
- **Easy** to program
- But also **flexible**
 - **Role-based**
 - Can be **reconfigured** by the implementer
 - Modules can **override** behavior
 - Configurable by the **end-user** (maybe in 3.0)

Rewrite the UI From Scratch

- Our current UI was not designed (it 'just happened')
- Things we'll do right this time:
 - Design for different roles
 - User testing
 - A new UI framework
 - Patterns, style guides

UI Framework Needs (for devs)

- Dynamic role-based handling of page requests
- Easy to build pages out of a common library of useful components
 - Reuse these components in modules
 - Reuse them for completely new UIs
- Good patterns that are easy to copy

Dynamic Page Handling

- **Dynamic** page request handler that determines what page to display to user
- Based on **Role**, User preferences, etc.
- The **administrator** maps what page different roles see for homepage, patient page, etc.
- Core will provide **good default pages** for standard roles, but administrators can **create their own pages** (a la Google homepage or JIRA dashboards)
- Eventually let end-users customize pages

Dynamic Page Handling

<https://xyz.org/patient.page?patientId=123>

If your role is
'Clinician'

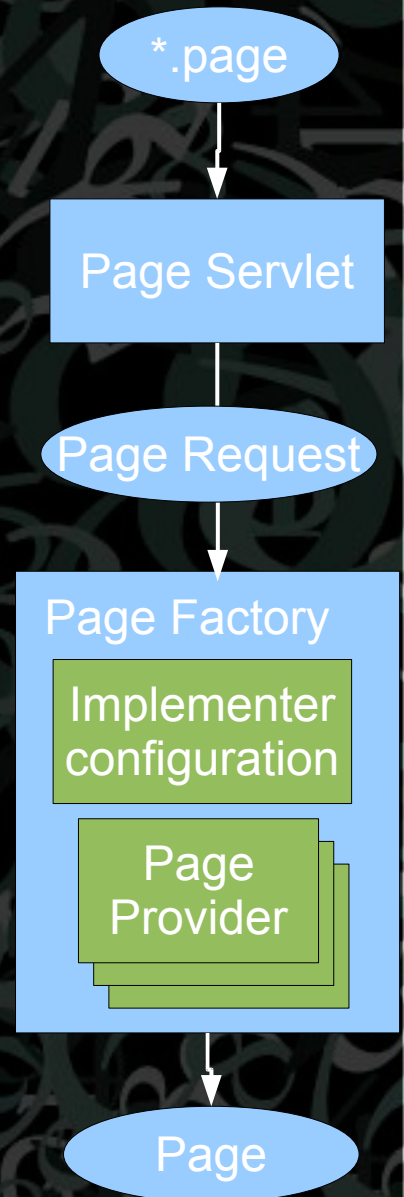
clinician-patient-page

Bob Smith	Alice Jones	Charles Brown	
Bob SMITH	ID: ABC-1234		
Overview	Date	Type	Location
Encounters	01/01/2010
Allergies	01/01/2010

If your role is
'Data Clerk'

pihrwanda-clerk-patient-page

Bob SMITH	ID: ABC-1234
Overview	Missing weight!
Form Entry	
Data Errors	



Page Fragments

- Pages are **composed** of Page Fragments (which may be **recursively** composed of other Page Fragments)

The screenshot illustrates a web application interface with several annotated page fragments. The interface is divided into a Site Header, a Patient Header, and a Patient Page. The Site Header contains a Logo, Login info, Notification bar, and Shortcuts. The Patient Header contains patient information and a Shortcuts section. The Patient Page contains a navigation bar with tabs for Basic Information, Encounters, Orders, Programs, Forms, and Overview.

Annotations and their corresponding fragments:

- Site Header**: Points to the top navigation bar containing:
 - Logo**: "Your Logo" with a globe icon.
 - Login info**: "Hi Darius" with a dropdown arrow and "Log Out" button.
 - Notification bar**: " (2) (5) " with envelope, thumbs up, and power icons.
 - Shortcuts**: "Find patient" with a magnifying glass icon.
- Data Clerk Patient Header**: Points to the patient information section containing:
 - Tabbed patient names: "1234 Jones Darius" and "4567 Smith Bob".
 - Profile: "Jones, Darius", "28 years | TB Program", "Male in PMCT Program", "No Height Recorded".
 - Shortcuts**: A section with links for "HIV Intake Form", "Exit From Care form", "Outpatient Visit form", "HIV Followup Form", "Home Visit form", and "More...".
- Data Clerk Patient Page**: Points to the bottom navigation bar containing tabs for "Basic Inforamation", "Encounters", "Orders", "Programs", "Forms", and "Overview".

Page Fragments

- Recursively composed
- Page Fragments from **multiple sources**
 - OpenMRS Core
 - Modules
 - User-created (in DB, like HTML Forms)

Tab One	Vertical tabs (OpenMRS core)
Tab Two	
More...	

(Data Entry Statistics module)		
When	Patients Created	Forms Entered
Today	3	15
Last 7 days	16	72

Page Fragments

- Recursively composed
- Multiple Sources
- Encapsulate **reusable** functionality
 - Infrastructure
 - vertical tab panel
 - box with title
 - Functional widgets
 - encounter list
 - find a patient

An Example Page Fragment

- Encounter List

Default usage on a patient page

Also usable on the home page

Encounters			
Date	Type	Location	Provider
01/Sep/2010	TB Followup	Cange PTJW	Jean Toussaint
02/Aug/2010	TB Followup	Cange PTJW	Jean Toussaint
01/Jul/2010	TB Intake	Cange PTJW	Jean Toussaint
...

Today's Encounters				
Patient	Date	Type	Location	Provider
Alice Marie	today 07:15	TB Followup	Cange PTJW	Jean Toussaint
Bob Smith	today 07:32	TB Followup	Cange PTJW	Jean Toussaint
Claire Fleur	today 07:41	TB Intake	Cange PTJW	Jean Toussaint
...

```
<fragment name="encounter-list"/>
```

```
<fragment view="encounter-list"  
  controller="todays-encounters"  
  title="Today's Encounters"  
  showPatientColumn="true"/>
```

PS- you should be able to
compose page fragments
without really programming

Good Patterns, Easy to Copy

- If it's easy to do things right, people will do them right.
- Provide consistent formatting of domain objects
- Provide reusable CSS
- Provide reusable Javascript functions
- Provide good examples of how to use these
- Provide a style guide


And now, for Implementers...

- These are very preliminary mockups
 - Many thanks to intern Emily Cunningham
- Everything is subject to massive changes (after your feedback, user testing, etc)
- Important to design pages and flows *before* anyone sits down to program them
 - Ask any programmer here if they'd prefer to think about UI themselves, or if they'd prefer for you to tell them exactly what to build :-)
- I need your help



http://



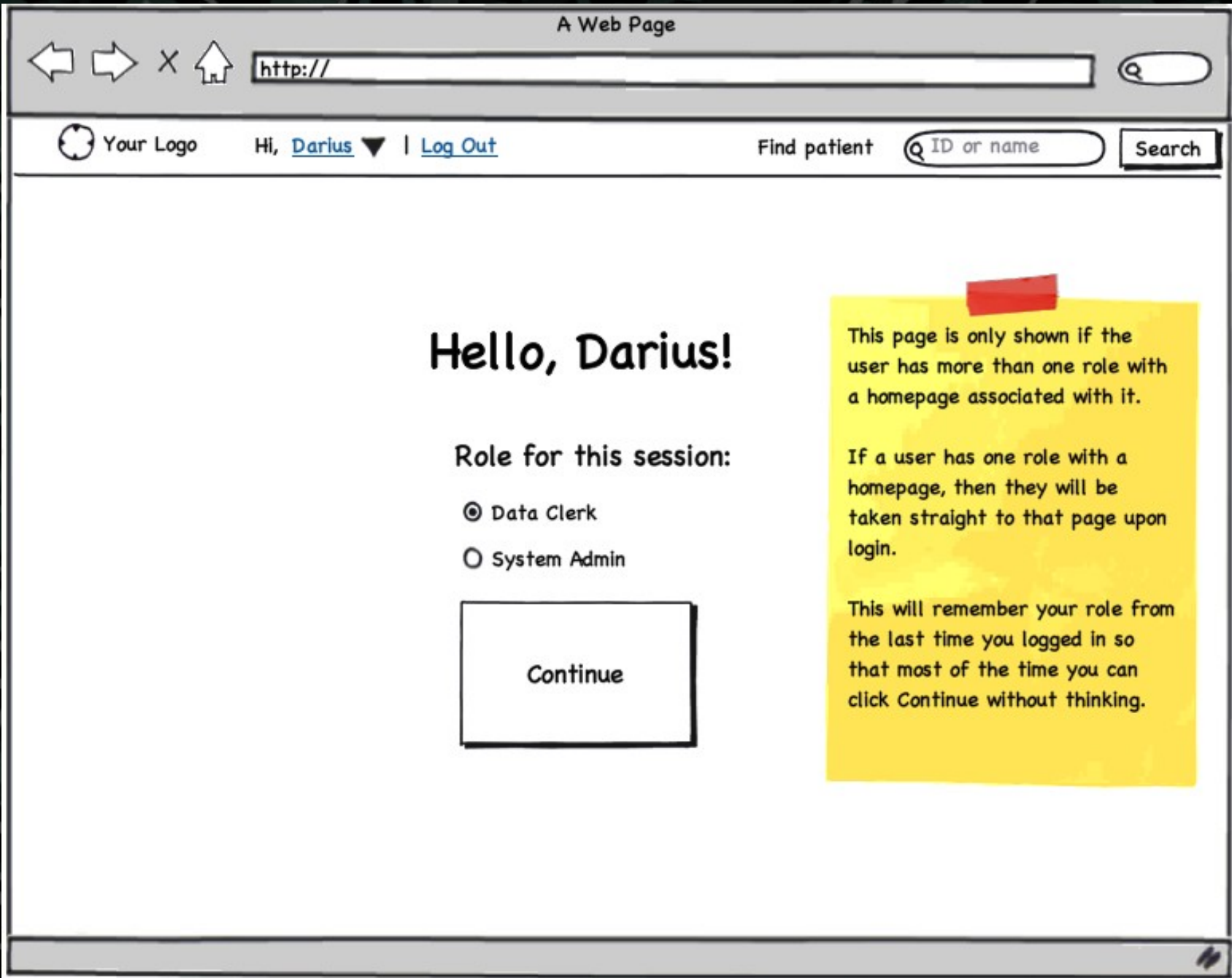
 Your Logo

Login to OpenMRS

User

Password


The first page users will see is the login screen. Unlike in the current application, we do not plan to allow anonymous users to see anything besides the login page.



Possible Data Clerk Homepage

A Web Page





← → × 🏠 🔍

 Your Logo Hi, [Darius](#) ▼ | [Log Out](#) Find patient 🔍

Find patient

New patient

Open Patients

 Jane Doe	Clinic ID: 5682301
25 yrs (30-May-1985)	Last Visit: HIV follow up
 Jane Doe	Clinic ID: 5682301
25 yrs (30-May-1985)	Last Visit: HIV follow up
 Jane Doe	Clinic ID: 5682301
25 yrs (30-May-1985)	Last Visit: HIV follow up
 Jane Doe	Clinic ID: 5682301
25 yrs (30-May-1985)	Last Visit: HIV follow up

Recently Closed

Zeus, D	Cunningham, E	Garcia Izolveria Gomez, I
5682301	5682301	5682301

My Data Entry Stats

When	Patients Created	Forms Entered
Today	3 (3.4)	15 (12.4)
7 days	20 (x)	y (z)

Reports

[Patients Scheduled Today](#)

[Prepar \(monthly\)](#)

[More](#)

Possible Data Clerk Homepage

A Web Page

← → × 🏠 🔍

Your Logo Hi, [Darius](#) ▼ | [Log Out](#) Find patient 🔍

Find patient 🔍

New patient

Messages (3)

Flagged Patient Records (2)

- [Darius Jones](#) Given by Supervisor Name 3/12/10
Issue: Male enrolled in PMCT Program
- [Emily Smith](#) Given by Supervisor Name 3/12/10
Issue: Missing Height

Reports to Print (1)

Drafts

Open Patients

My Data Entry Stats

When	Patients Created	Forms Entered
Today	3 (3.4)	15 (12.4)
7 days	20 (x)	y (z)

Reports

- [Patients Scheduled Today](#)
- [Prepar \(monthly\)](#)
- [More](#)

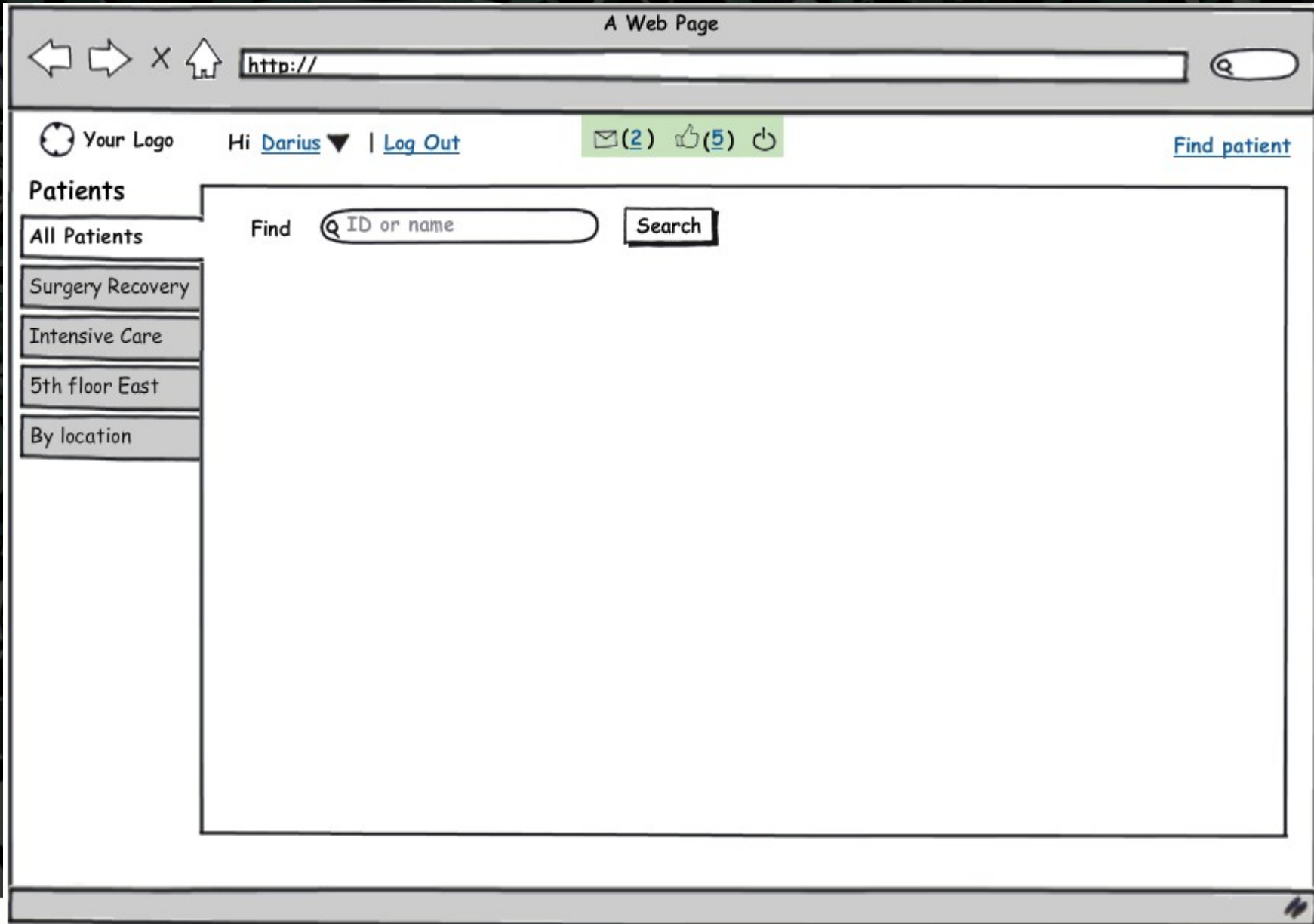
Possible Clinician Homepage

The screenshot shows a web browser window titled "A Web Page" with a URL bar containing "http://". The page header includes "Your Logo", "Hi, Darius", and a "Log Out" link. The main content area is divided into several sections:

- Patient List:** A table with a time column on the left and patient names in the main column. The names are Peter Howe, Mandy Curtis, John Hawk, James Guthry, and Sarah Waters.
- Search and Actions:** A "Find patient" search bar with "ID or name" as a placeholder and a "Search" button. Below it is a "Create New patient" link.
- My Patient Lists:** A list of categories including "Surgery Recovery", "Intensive Care", and "5th Floor".
- Messages (3):** A section containing "Flagged Patient Records (2)".
- Flagged Patient Records (2):** Two entries: "Darius Jones Given by Supervisor Name Issue: Male enrolled in PMCT" and "Emily Smith Given by Supervisor Name Issue: Missing".
- Reports to Print (1):** A section for reports to be printed.
- Drafts:** A section at the bottom for draft messages.

Time	Patient Name
00am	Peter Howe
30am	Mandy Curtis
00am	John Hawk
30am	
00am	James Guthry
30am	
00am	Sarah Waters
30am	
00pm	
30pm	
00pm	
30pm	

Find a Patient



Find a Patient (grid +/-)

A Web Page

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Your Logo Hi **Darius** ▼ | [Log Out](#) (2) (5) [Find patient](#)

Patients

All Patients

ID#	Family	Given	Middle	Age	Birthdate	Gender
<input type="checkbox"/> 3422756-TR	Azul	Darius		43	2/4/1968	

Darius Azul Clinic ID: 5682301 Last Visit: HIV follow up
 25 yrs (30-May-1985) National ID: 34850-RS 3/Jan/2010 at Rwinkwavu Hospital
Program HIV, TB Health Center: Spaceneedle Tribe: Berit

<input type="checkbox"/> 3422756-TR	Jazayeri	Darius		33	4/8/1978	
<input type="checkbox"/> 3422756-TR	Jones	Darius	Adam	28	8/23/1983	
<input type="checkbox"/> 3422756-TR	Azul	Darius		43	2/4/68	
<input type="checkbox"/> 3422756-TR	Jazayeri	Darius		33	4/8/1978	
<input type="checkbox"/> 3422756-TR	Jones	Darius	Adam	28	8/23/1983	

1-20 of 62 Results < previous [1](#) [2](#) [3](#) next >

Can't find them?

Find a Patient (more info)

A Web Page

← → × 🏠 🔍





Your Logo Hi **Darius** ▼ | [Log Out](#) ✉️(2) 👍(5) 🔌 [Find patient](#)

Patients

- All Patients
- Surgery Recovery
- Intensive Care
- 5th floor East
- By location

Find

62 results

 Anna Cunningham 25 yrs (30-May-1985) Program: HIV, TB	Clinic ID: 5682301 National ID: 34850-RS Heath Center: Spaceneedle	Last Visit: HIV follow up 3/Jan/2010 at Rwinkwavu Hospital Tribe: Berit
 Johanna Cunningham 32 yrs (30-May-1978) Program: HIV, TB	Clinic ID: 5682301 National ID: 34850-RS Heath Center: Spaceneedle	Last Visit: HIV follow up 3/Jan/2010 at Rwinkwavu Hospital Tribe: Berit
 Sarah Cunningham 42 yrs (30-May-1968) Program: HIV, TB	Clinic ID: 5682301 National ID: 34850-RS Heath Center: Spaceneedle	Last Visit: HIV follow up 3/Jan/2010 at Rwinkwavu Hospital Tribe: Berit
 Thomasina Cunningham 20 yrs (30-May-1990) Program: HIV, TB	Clinic ID: 5682301 National ID: 34850-RS Heath Center: Spaceneedle	Last Visit: HIV follow up 3/Jan/2010 at Rwinkwavu Hospital Tribe: Berit

1-4 of 62 Results < previous [1](#) [2](#) [3](#) next >

Can't find them?

Patient Lists

A Web Page

http://

Your Logo Hi **Darius** | [Log Out](#) [Find patient](#)

Patients

All Patients
Surgery Recovery
Intensive Care
5th floor East
By location





Search within list **Actions**
[Make default list](#) [Summaries](#) [Report...](#)

Anna Cunningham 25 yrs (30-May-1985) Program: HIV, TB	Clinic ID: 5682301 National ID: 34850-RS Heath Center: Spaceneedle	Last Visit: HIV follow up 3/Jan/2010 at Rwinkwavu Hospital Tribe: Berit
Johanna Cunningham 32 yrs (30-May-1978) Program: HIV, TB	Clinic ID: 5682301 National ID: 34850-RS Heath Center: Spaceneedle	Last Visit: HIV follow up 3/Jan/2010 at Rwinkwavu Hospital Tribe: Berit
Sarah Cunningham 42 yrs (30-May-1968) Program: HIV, TB	Clinic ID: 5682301 National ID: 34850-RS Heath Center: Spaceneedle	Last Visit: HIV follow up 3/Jan/2010 at Rwinkwavu Hospital Tribe: Berit
Thomasina Cunningham 20 yrs (30-May-1990) Program: HIV, TB	Clinic ID: 5682301 National ID: 34850-RS Heath Center: Spaceneedle	Last Visit: HIV follow up 3/Jan/2010 at Rwinkwavu Hospital Tribe: Berit
Anna Cunningham 25 yrs (30-May-1985) Program: HIV, TB	Clinic ID: 5682301 National ID: 34850-RS Heath Center: Spaceneedle	Last Visit: HIV follow up 3/Jan/2010 at Rwinkwavu Hospital Tribe: Berit

'Query-based' Patient Lists

A Web Page

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 Your Logo Hi **Darius** ▼ | [Log Out](#)  (2)  (5)  [Find patient](#)







Patients

All Patients **Surgery Recovery** Intensive Care 5th floor East **By location**

("By location" is a query-based list)

Where?


23 patients **Actions**
[Make default list](#) [Summaries](#) [Report...](#)

ID#	Family	Given	Middle	Age	Birthdate	Gender
3422756-TR	Azul	Darius		43	2/4/1968	
3422756-TR	Jazayeri	Darius		33	4/8/1978	
3422756-TR	Jones	Darius	Adam	28	8/23/1983	
3422756-TR	Azul	Darius		43	2/4/68	
3422756-TR	Jazayeri	Darius		33	4/8/1978	
3422756-TR	Jones	Darius	Adam	28	8/23/1983	
3422756-TR	Azul	Darius		43	2/4/68	
3422756-TR	Jazayeri	Darius		33	4/8/1978	
3422756-TR	Jones	Darius	Adam	28	8/23/1983	

Your Default List

A Web Page





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🏠 Your Logo Hi **Darius** ▼ | [Log Out](#) 📧 (2) 👍 (5) 🔌  [Find patient](#)

Find patient

New patient

Open Patients

 Jane Doe 25 yrs (30-May-1985)	Clinic ID: 5682301 Last Visit: HIV follow up
 Jane Doe 25 yrs (30-May-1985)	Clinic ID: 5682301 Last Visit: HIV follow up
 Jane Doe 25 yrs (30-May-1985)	Clinic ID: 5682301 Last Visit: HIV follow up
 Jane Doe 25 yrs (30-May-1985)	Clinic ID: 5682301 Last Visit: HIV follow up

Recently Closed

Zeus, D 568230	Cunningham, E 568230	Garcia Izolveria Gomez, I 568230
-----------------------------------	-----------------------------------------	-----------------------------------------------------

My Data Entry Stats

When	Patients Created
Today	3 (3.4)
7 days	20 (x)

Reports

[Patients Scheduled Today](#)

[Prepfar \(monthly\)](#)

[More](#)

List: 5th Floor

Next Patient >

- Ann Cook
- Beth Simone
- Candy Apple
- Darius Jones
- ✓ Set as default

Patient Page for Data Clerks

A Web Page

http://

Your Logo Hi, Darius | Log Out Find patient ID or name Search

1234 Jones Darius x 4567 Smith Bob x

Jones, Darius
28 years | TB Program

1 Shortcuts

[HIV Intake Form](#) [Exit From Care form](#) [Outpatient Visit form](#)
[HIV Followup Form](#) [Home Visit form](#) [More...](#)

Basic Information Encounters Orders Programs Forms Etc

Placeholder for information, tabs, etc.

This is the Patient Page for the Data Clerk role.

1) "Shortcuts" would be the most common actions this user is likely to take, e.g. fill out common forms, print patient summary, etc. (If we want to restrict this to just forms, it could be called "Common Forms" instead.)

What shortcuts should appear. Some options:

- * all forms
- * most commonly used forms (current user vs all users?) (this week vs all-time?) (should it depend on current patient?)
- * configured by system administrator
- * forms starred by current user

Can we get rid of this?






The screenshot shows a medical software interface. At the top, there is a header with "Your Logo", "Hi, Darius", and "Log Out". A search bar on the right says "Find patient" with a search icon and "ID or name". Below the header, the patient's name "Jones, Darius" is displayed, along with "28 years | TBS Program". A "Shortcuts" section contains links for "HIV Intake Form" and "HIV Followup Form". A "Basic Informam" section is partially visible. A modal dialog box titled "HIV Followup Form" is open, asking "Fill out HIV Followup Form?" with "OK" and "Cancel" buttons. Below the dialog, a table titled "Most Recently Entered:" shows a list of encounters.

Encounter Date	Location	Provider	Entered By	Entered date
03/May/2010	CityB	Cynthia Marshall	Josh Redding	06/May/2010
28/May/2010	CityB	Cynthia Marshall	Josh Redding	31/May/2010
05/June/2010	RegionX	Denise Brown	Josh Redding	06/June/2010
27/June/2010	CityB	Cynthia Marshall	Josh Redding	30/June/2010


(Part of) Patient Page for Clinicians

A Web Page

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 Your Logo Hi **Darius** ▼ | [Log Out](#)  (2)  (5)   [Find patient](#)

1234 Jones Darius x 4567 Smith Bob x

 **Jones, Darius** Allergies: Penicillin DNR Order

28 years | TB Program

Overview

Encounters

Date	Type	Location	Provider
01/04/2010	Return Visit	Cange PTJW	Dr. Lambert
01/03/2010	Return Visit	Cange PTJW	Dr. Lambert
01/02/2010	Return Visit	Cange PTJW	Dr. Lambert
01/01/2010	Initial Visit	Cange PTJW	Dr. Lambert
...			

Preview [edit](#)

Date	01/03/2010
Type	Return Visit
Location	Cange PTJW
Provider	Dr. Lambert
-	
Weight	64 kg
Height	173 cm
Symptom Present	Fever
...	


(Part of) Patient Page for Clinicians

A Web Page

← → × 🏠 🔍

Your Logo Hi **Darius** ▾ | [Log Out](#) 📧 (2) 👍 (5) ⏻ [Find patient](#)

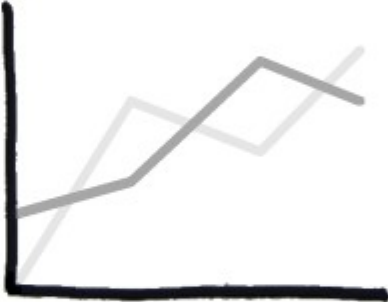
1234 Jones Darius x 4567 Smith Bob x

 **Jones, Darius** Allergies: Penicillin DNR Order
28 years

Overview Encounters

Weights

Date	Weight (kg)
01/04/2010	66
01/03/2010	64
01/02/2010	61
01/01/2010	61



Height 173 cm
Symptom Present Fever
...

[edit](#)

You!

- What do you really need out of the box in 2.0?
 - Does a clinician-facing interface matter?
 - Is a program-manager dashboard important?
- Remember how I said I need your help?
 - Need your opinions and use cases
 - Can we use your teams for user testing?
 - And there are many more screens to design!

OpenMRS 2.0

<http://wiki.openmrs.org/display/docs/OpenMRS+2.0+UI+Framework>

<http://wiki.openmrs.org/display/docs/OpenMRS+2.0+UI+Content>