Bluebird

ND0H Quick Start

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Introduction to the Bluebird DOH Surveillance and Case Management System

This short *Quick Start* manual outlines the basics a nDOH User needs to understand in order to begin using the **Bluebird DOH Surveillance and Case Management System**.

This software is being *actively developed* and new versions of this quick start will be available on intelms.com/397 as new functionality is added. Please ensure you are using the latest download of this document.

Please feel free to pass on suggestions as to how this software should be improved to the **NDoH COVID-19 Project Owner** (Milani Wolmerans) who will vet those suggestions before passing them on to darryl@intelms.com.

The current version only allows a high level view of COVID-19 lab surveillance data in South Africa. The specification for individual case management is included in this manual even though that module is still in development.

A later version will better organize the dashboard graphics interface which has grown substantially over the last 3 weeks and is now too large to show all graphs on a single page without a long page loading time.

The version which is expected to be live by Thursday (16 April 2020), will allow a drill down to individual patients and individual test results.

The version after that will integrate data collected by GovChat and will thereby automate much of the manual data collection.

The last version currently in planning will allow different access for different DOH Users from the Minister down to the ward level.

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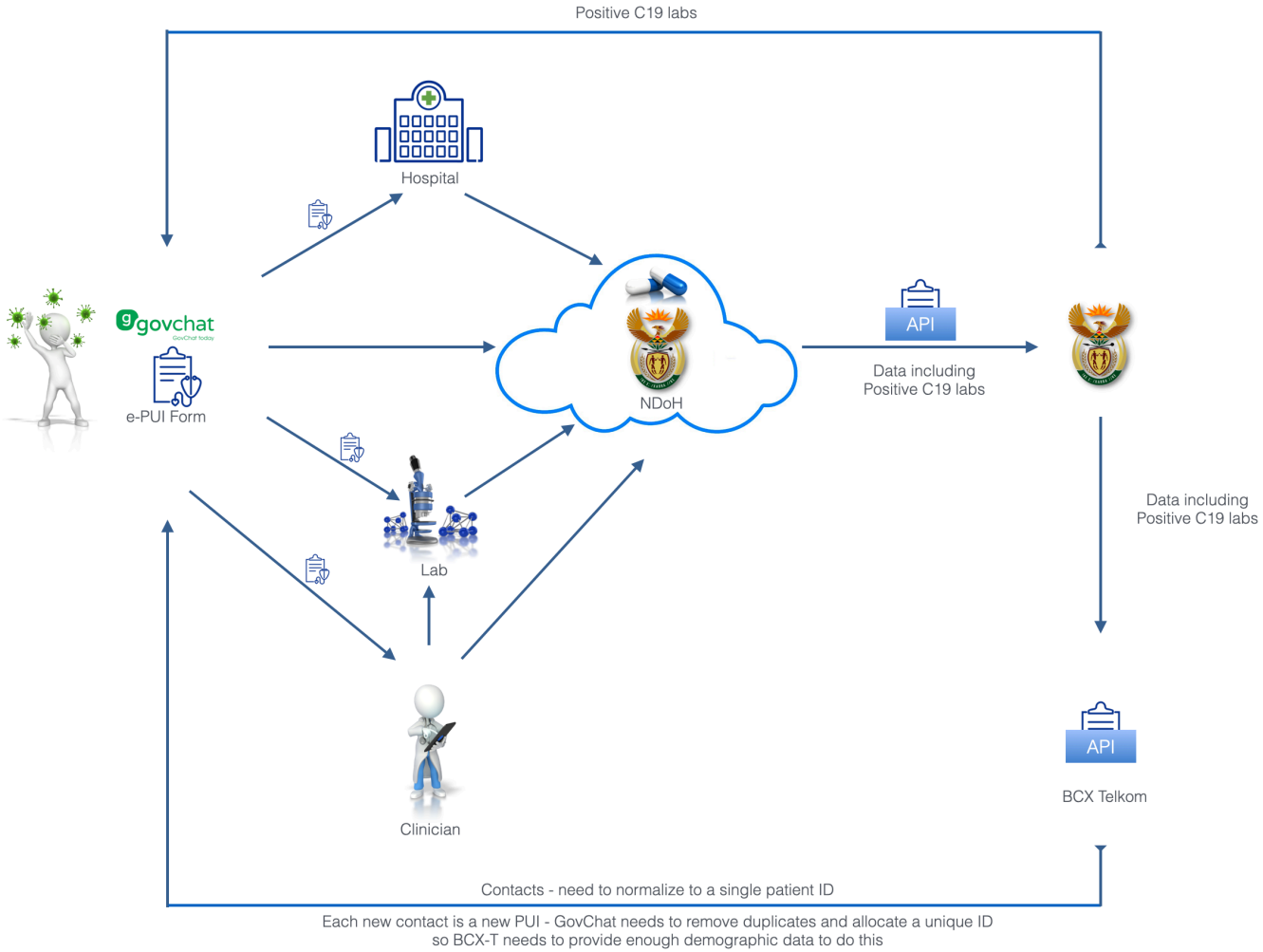
Overview of the Solution

This document will describe how to use the part **inside the blue cloud**, that is, the part that will be used by NDoH Users.



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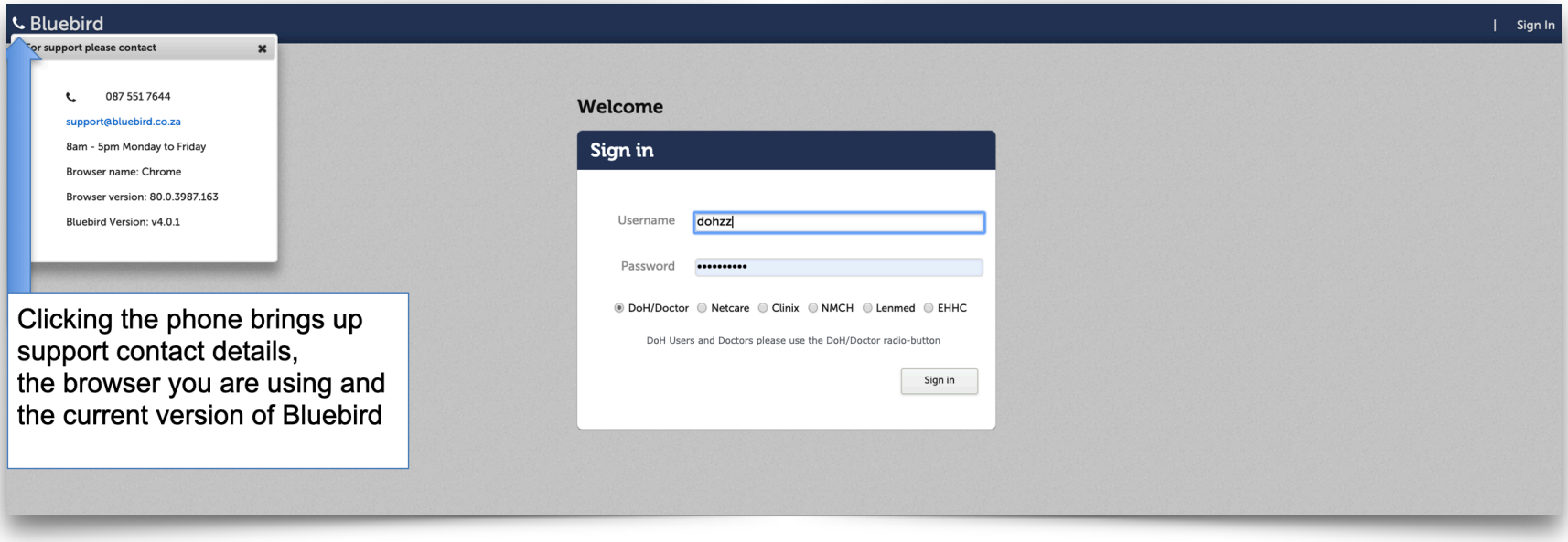
Log-In

Open your browser to this URL: bluebird.co.za/bbw



After typing in your User name and Password, ensure the DoH/Doctor radio-button is selected and click the **Sign In** button.

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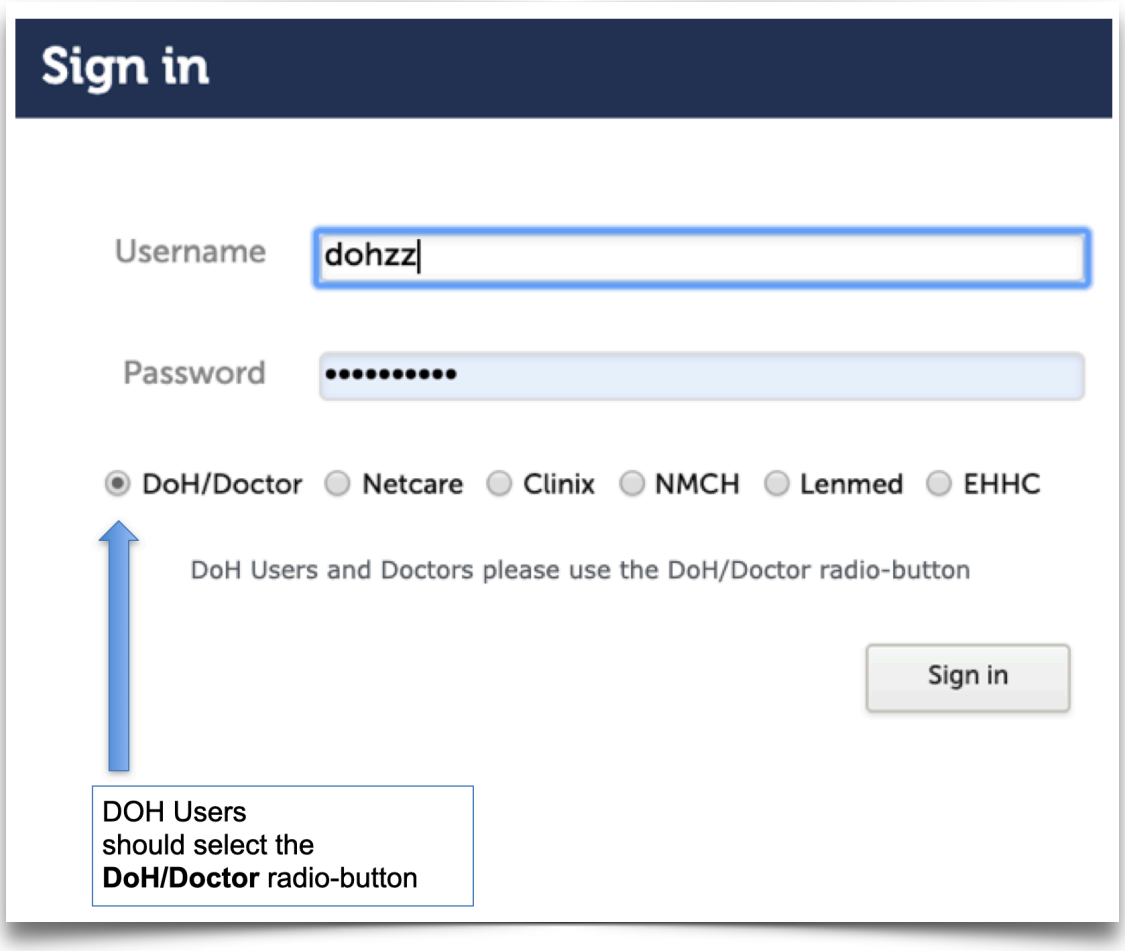

Once the NDoH Authentication server is Bluebird enabled, a separate NDoH radio-button will be available for all NDoH users and all the hospital Users that the NDoH wishes to enable.

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Home Page

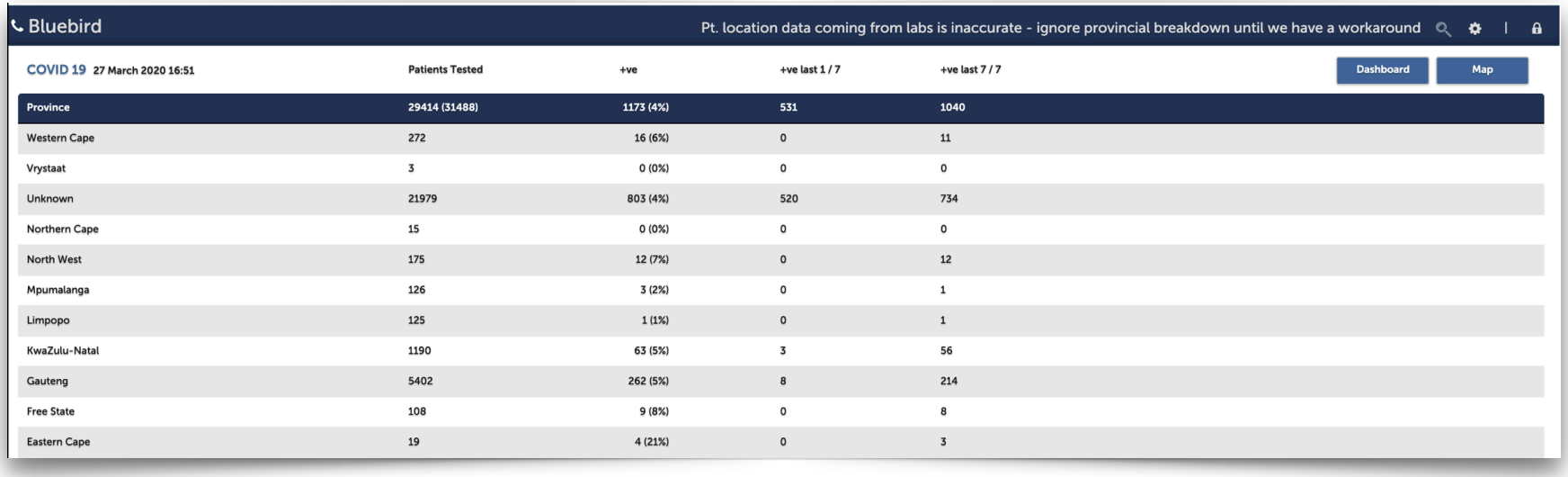
After logging in you will see the page below which is a list view that shows the totals of all the patients tested up until this point in time (and, in brackets after the patients tested total, a total of all the tests done thus far).

The number of patients that have tested positive (and the number of positive tests in brackets) is shown as well as the total number of positive patients that the the labs have reported in the last day and in the last week. Note that the last 2 totals are based on the date the results were released, not the date on which the sample was collected.

Notes

1. If a specimen was collected 8 days ago but was only reported by the lab in the last 24 hrs it will be counted in both the last day and the last 7 days columns.

2. The message at the top right of the blue bar is not longer showing. We have implemented a workaround that fixes much of the poor demographic data coming from the various labs. Going forward, GovChat will be collecting more accurate data on their PUI forms and will be sending that to Bluebird in real time.



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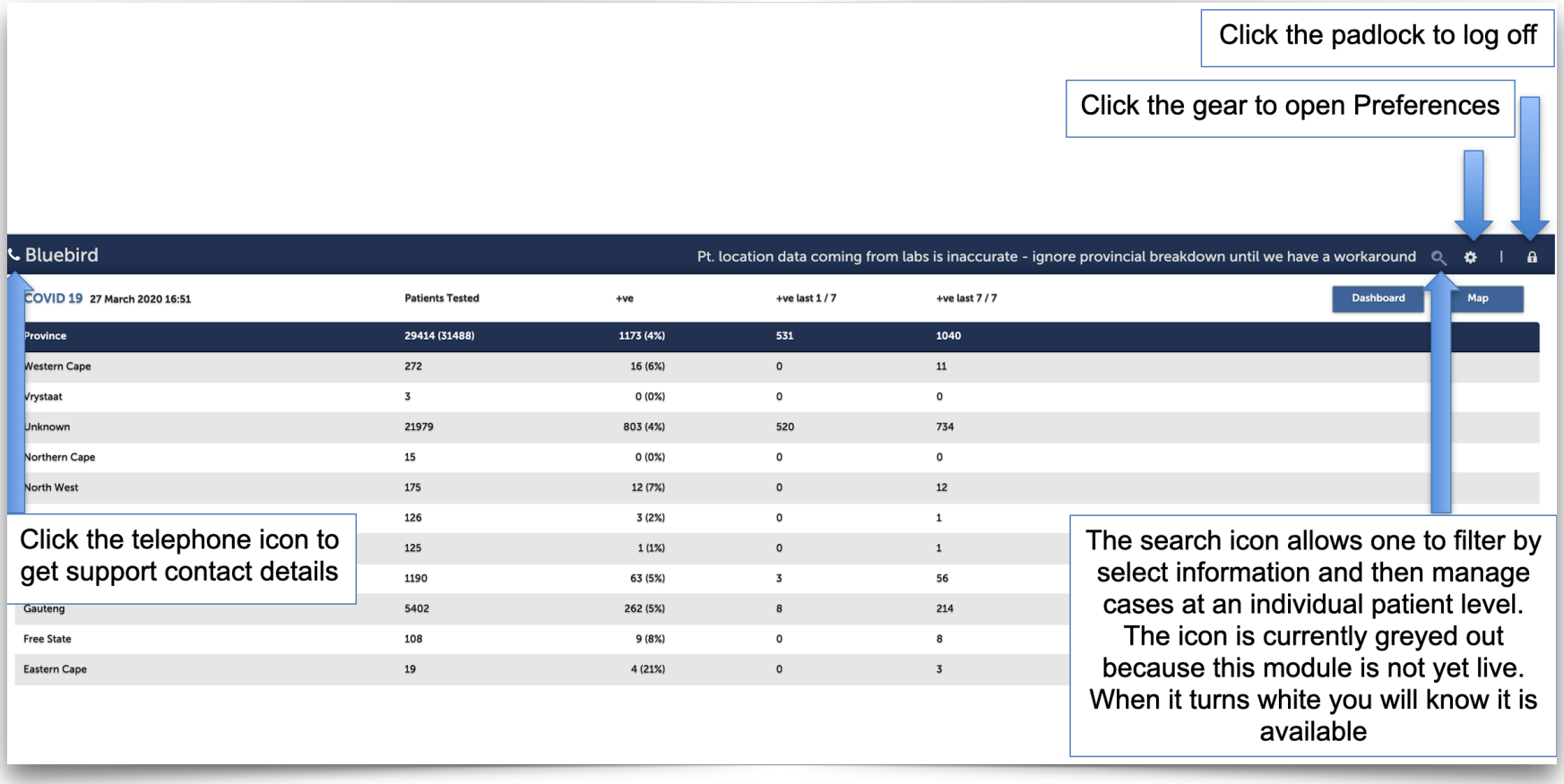

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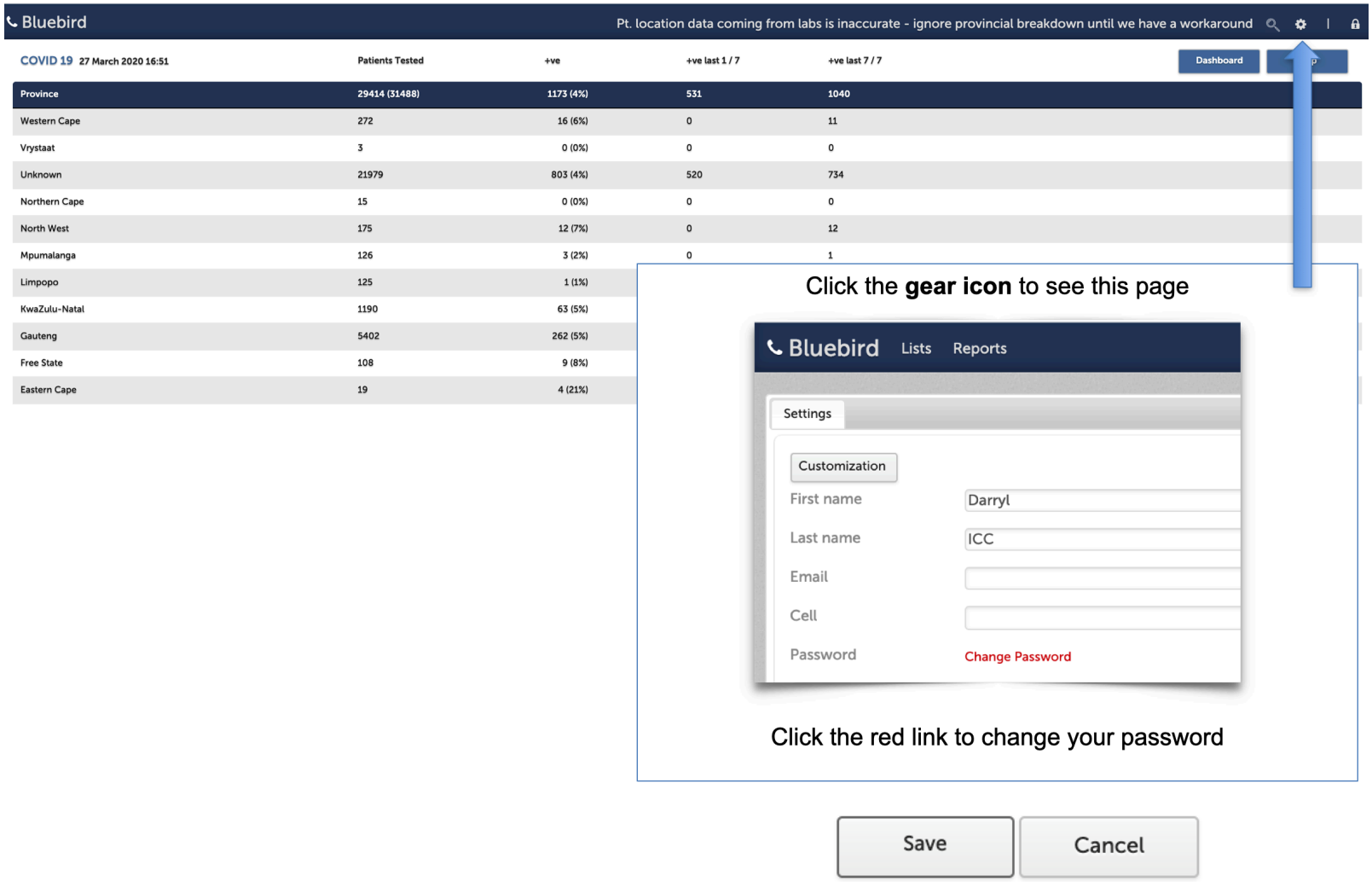
Changing passwords. For the initial, temporary User Names and Passwords that Bluebird will supply (as distinct from the NDoH authentication system UN and PWs that will be used after the first week), a password change is forced on first Log-in.



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Click to open a **new browser tab*** with all cases on a map of South Africa.
One is able to zoom in down to street level

COVID 19 27 March 2020 16:51	Patients Tested	+ve	+ve last 1 / 7	+ve last 7 / 7
Province	29414 (31488)	1173 (4%)	531	1040
Western Cape	272	16 (6%)	0	11
Vrystaat	3	0 (0%)	0	0
Unknown	21979	803 (4%)	520	734
Northern Cape	15	0 (0%)		0
North West	175	12 (7%)		12
Mpumalanga	126	3 (2%)		1
Limpopo	125	1 (1%)		1
KwaZulu-Natal	1190	63 (5%)		56
Gauteng	5402	262 (5%)		214
Free State	108	9 (8%)		8
Eastern Cape	19	4 (21%)		3

We have developed an algorithm to help fix poor data entry by the lab and work out the patient address. This gets better as it learns but has already reduced the unknowns to below 200

With all the new visualizations we have added there is now too much on this page so it loads a little slowly* - we are in the process of redesigning the interface to display graphics on different pages

* Both the Dashboard and the Map open on new tabs in your browser. This is to allow you to keep the list view (your primary workspace) open and simply close the dashboard or map browser tab when you are done with the graphics.

The one problem with this approach arises if you do not refresh your browser periodically, one tab might be a few minutes behind the others and show subtly different figures.

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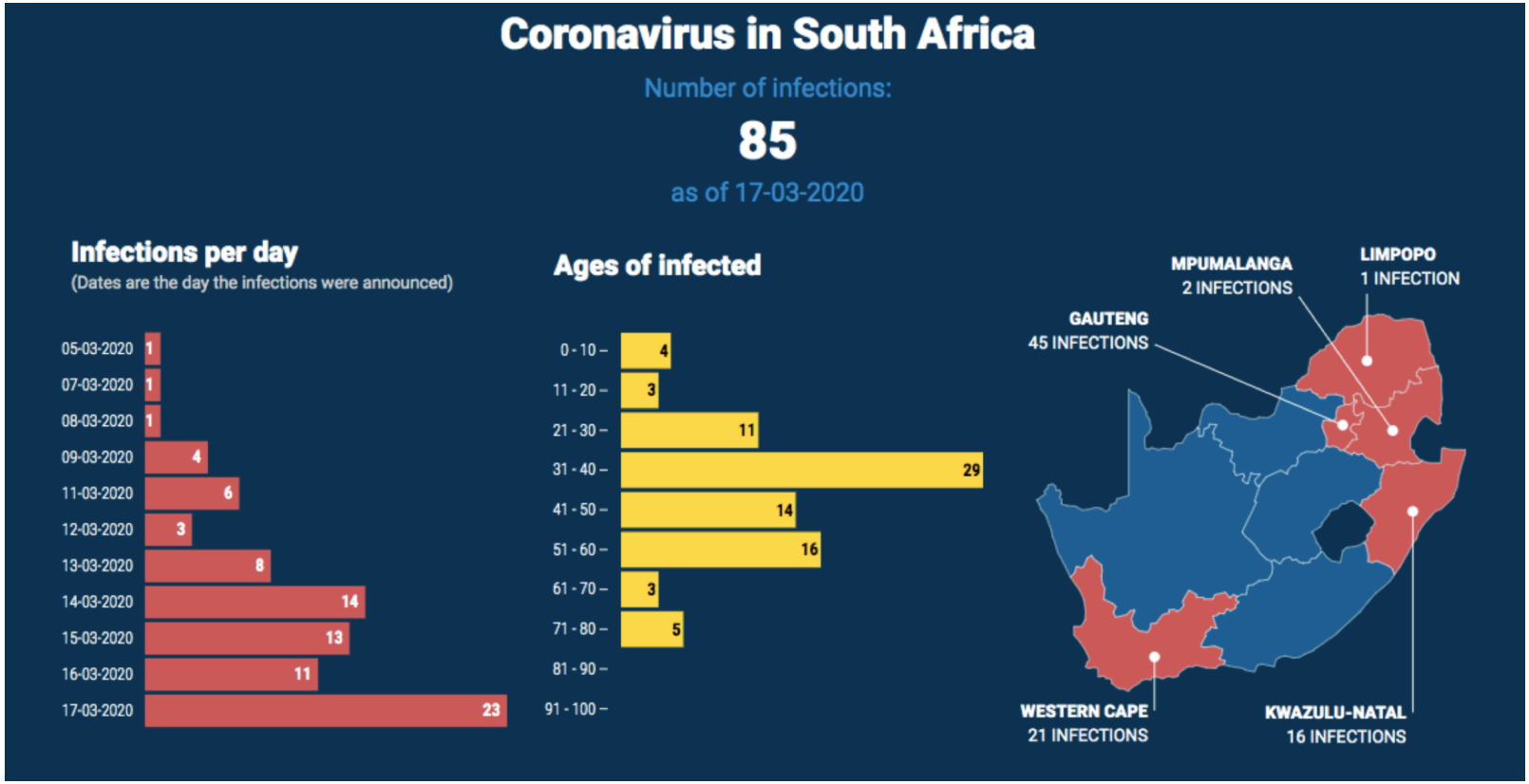
Dashboard

Clicking the “Dashboard” button will open in a NEW browser tab (close this browser tab to exit the dashboard).

In future versions, we will be reorganizing the Home Page because, at present, with all the recently added visualizations, the dashboard page is loading slower than we would like.

Here is the original dashboard which used visualizations suppled (with permission) from mediahack.co.za and which we modified to use real time data. We have steadily been replacing this starter pack of graphs with ones purpose built by our visualization team to use live data feeds. Only the older graphics are used in this manual so as not to display current confidential data.



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Map

This will open in a NEW browser tab (close the browser tab to exit the dashboard). This is page is also showing an old version of the Map so as not to display current data.

Note: This map is **interactive** and one can use the + button on the bottom right to drill down to the street level.

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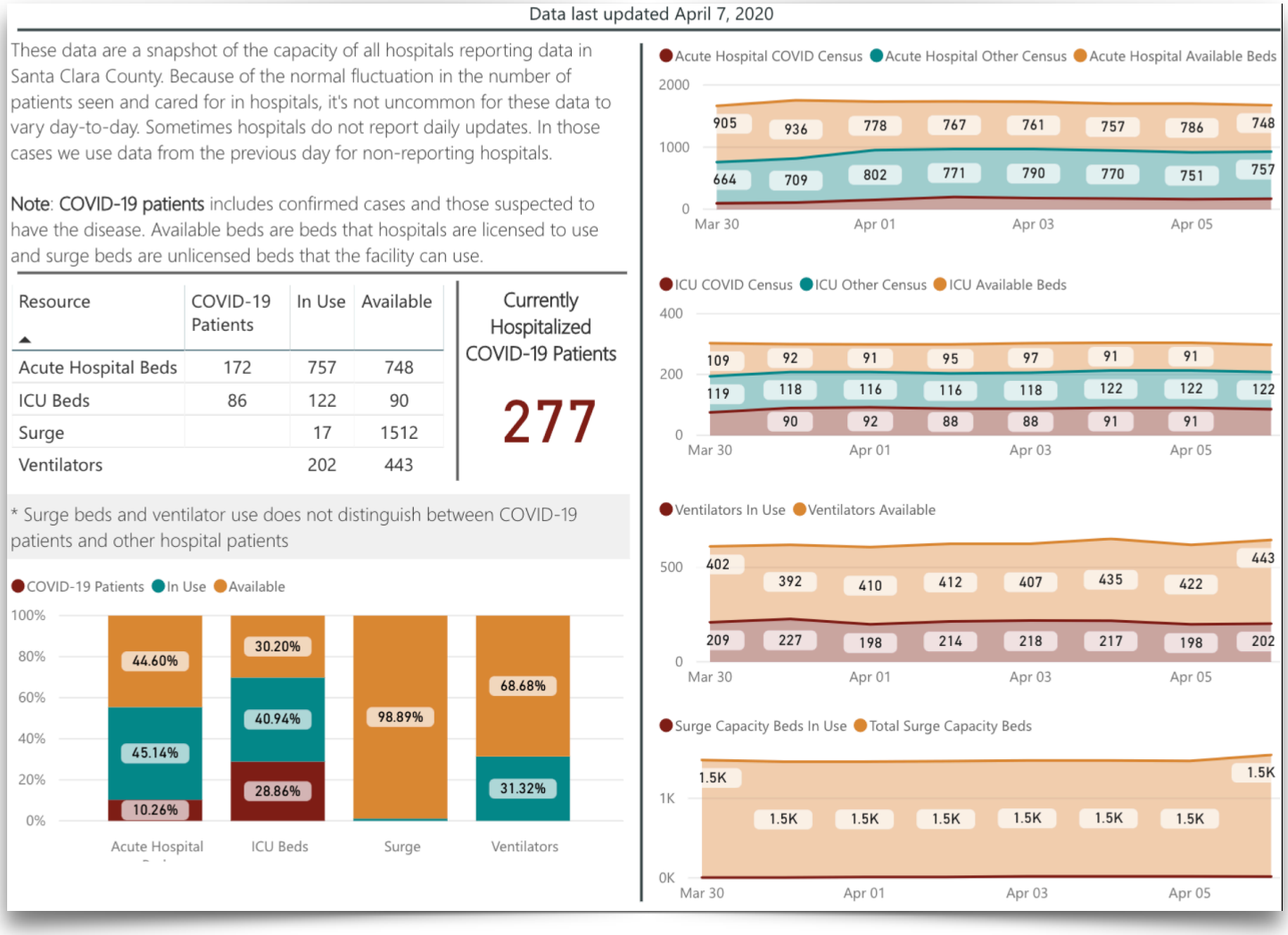
Hospital Dashboard

This is the Californian dashboard that we are adapting for South Africa. This work is still in progress and we might find an even better way to do this.

COVID-19 Hospital Data



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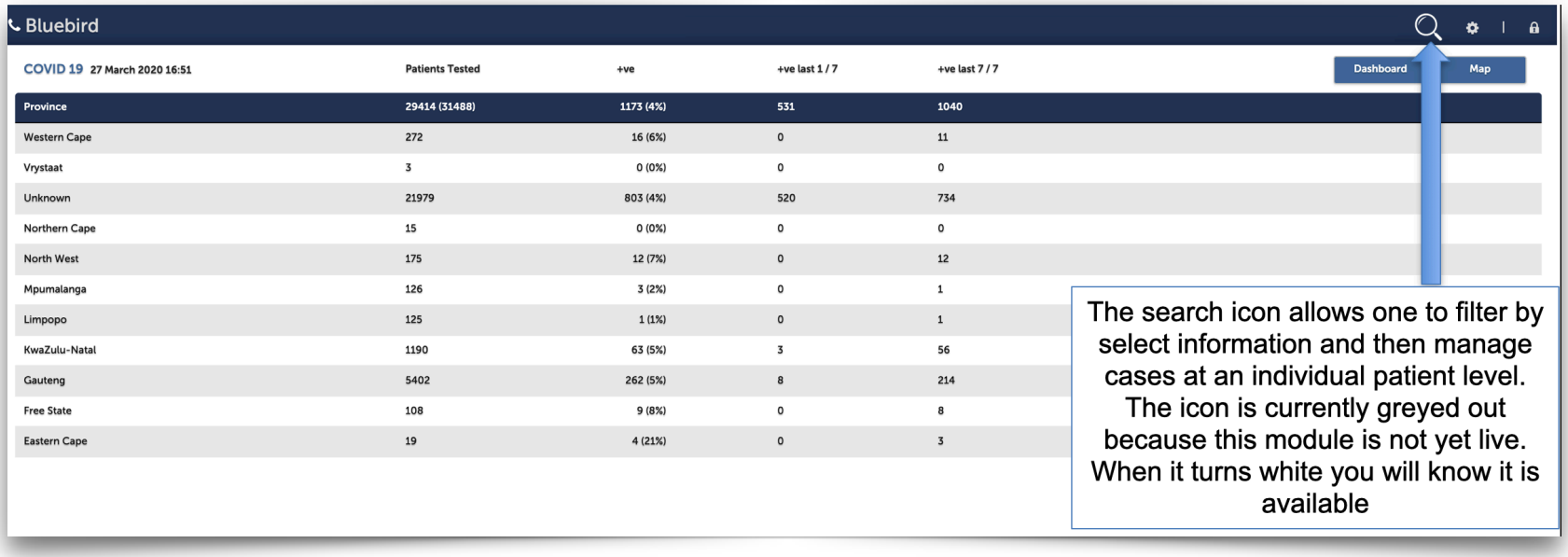
Accessing the Case List

Clicking the search icon allows one to construct an individualized case list in real time. Different Roles might only be able to see subsets of data, for example a field worker at the ward level will only see individuals for that ward.



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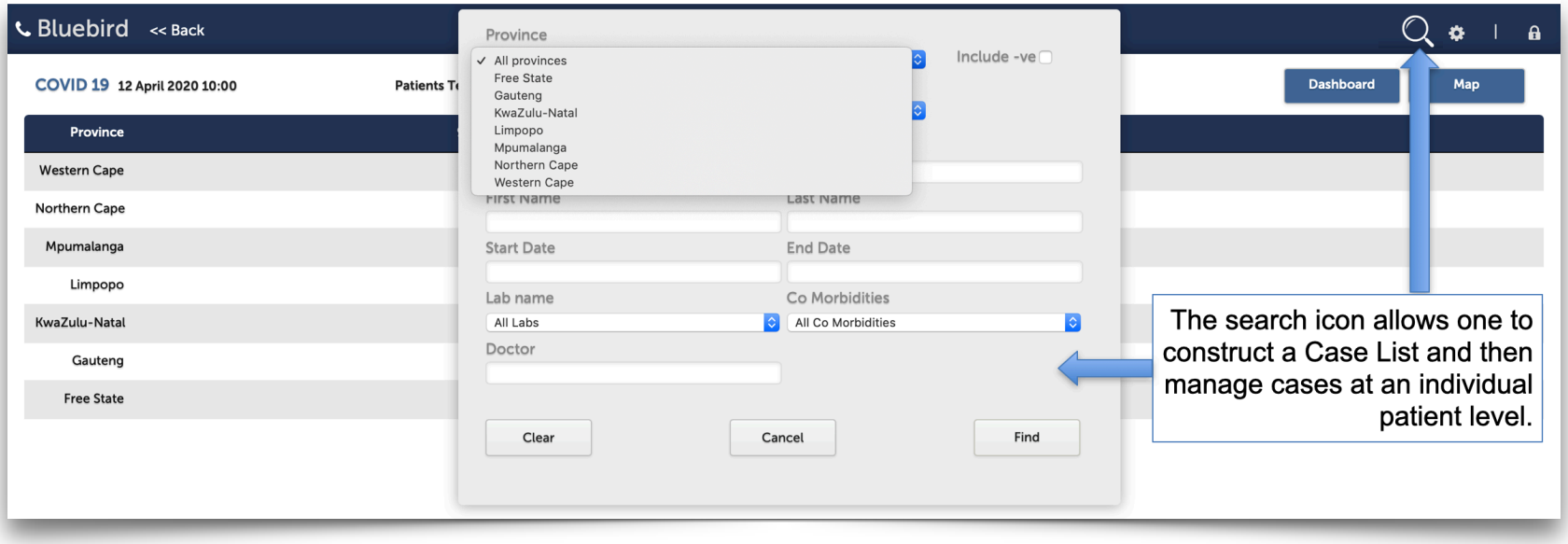

This search box needs more input from the NDoH, we think it would be helpful to be able to search by ward, local municipality, district municipality…

The image on the following page shows a magnified of the search box:

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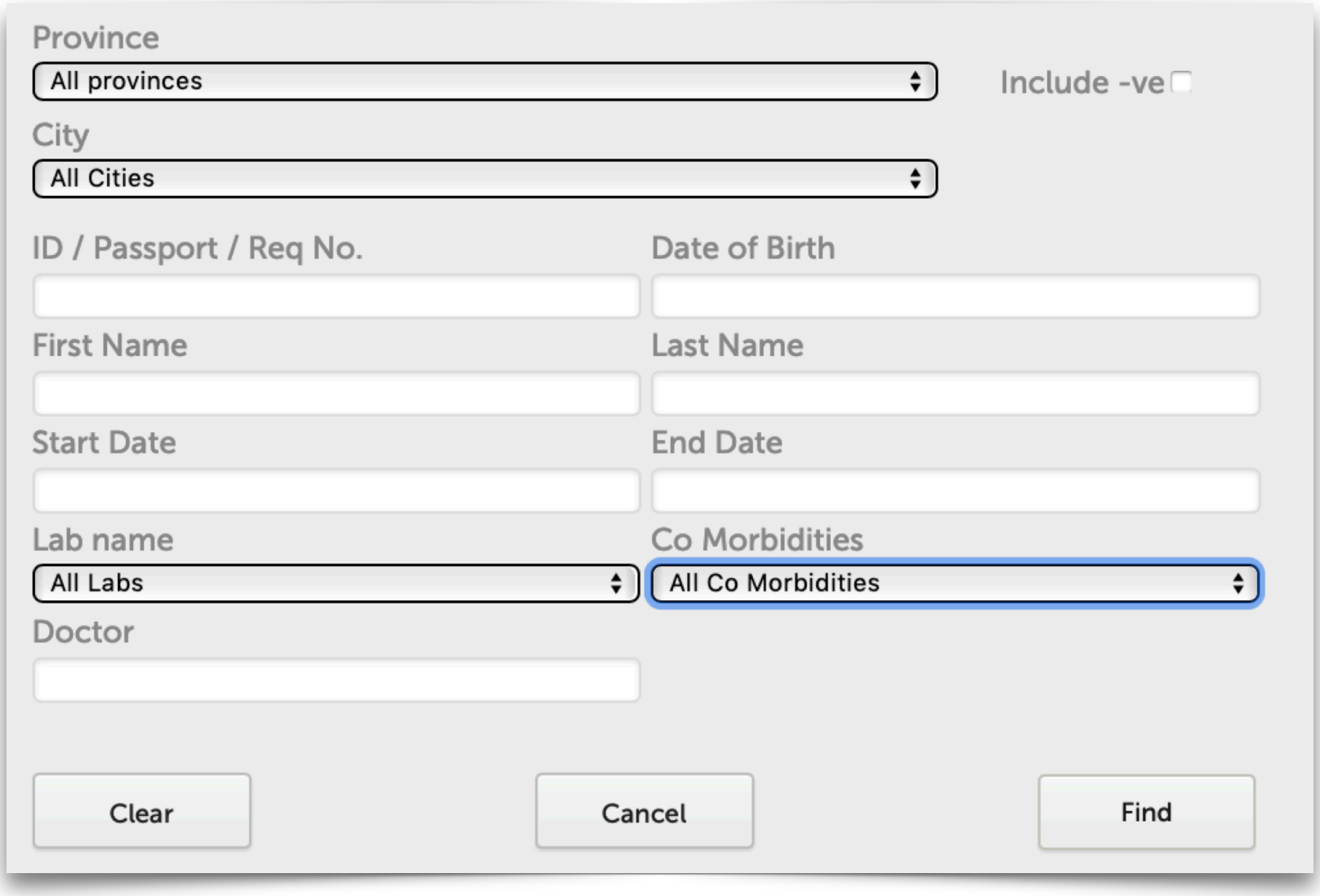

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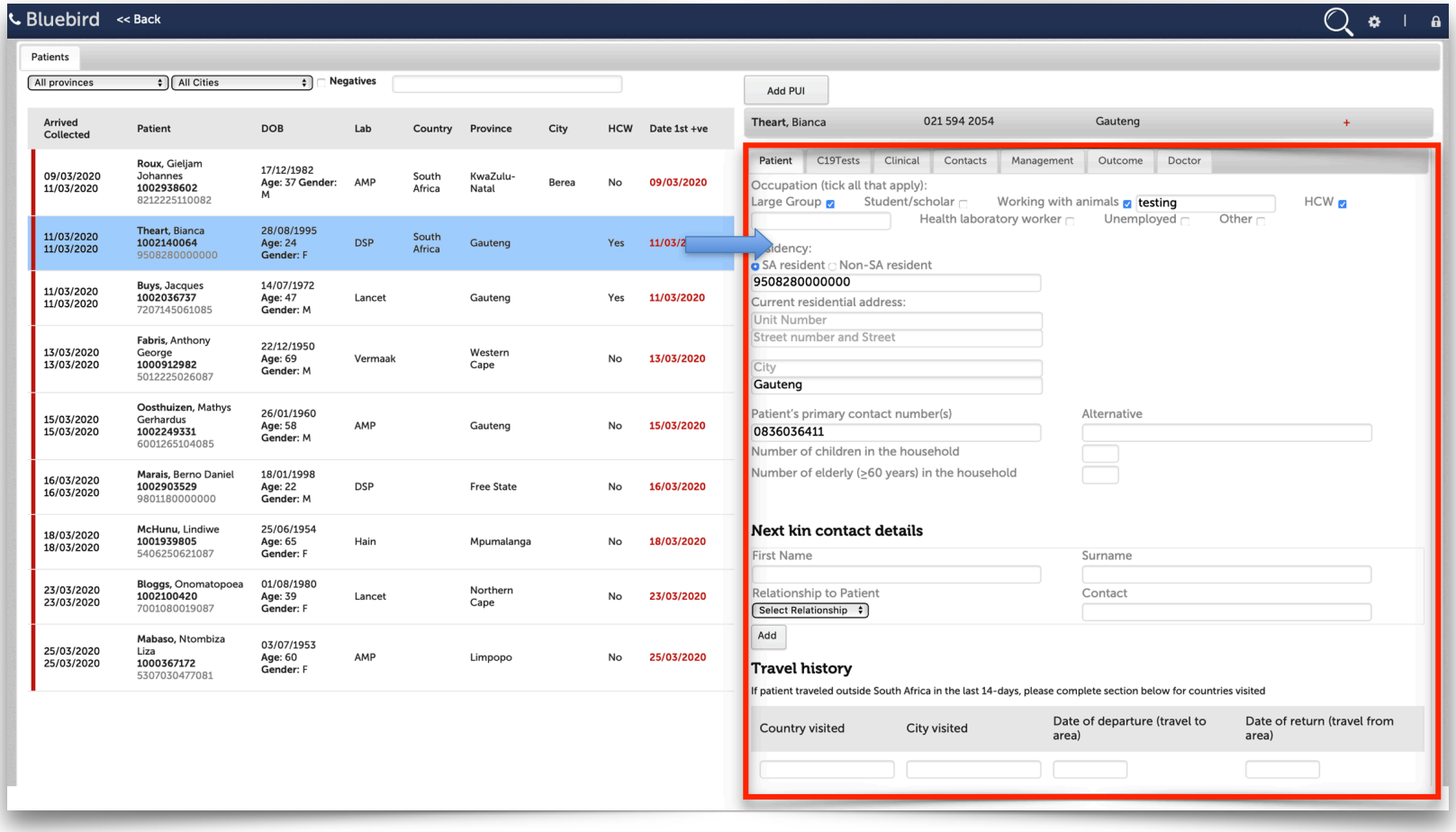
Once the appropriate cases have been found, they will be displayed as a Case List (individual patients) on the left pane in the image below. Selecting any of these patients will show detail about that individual patient on the right pane (which is highlighted in red in the image below).

Note that the top of the right pane has a button that allows one to add a new Person Under Investigation and below that button is a bar showing the selected patient name, their cell phone number and province and whether they have ever tested +ve for COVID-19.



The following pages will focus on each tab inside the red rectangle, starting with the “Patient” tab.

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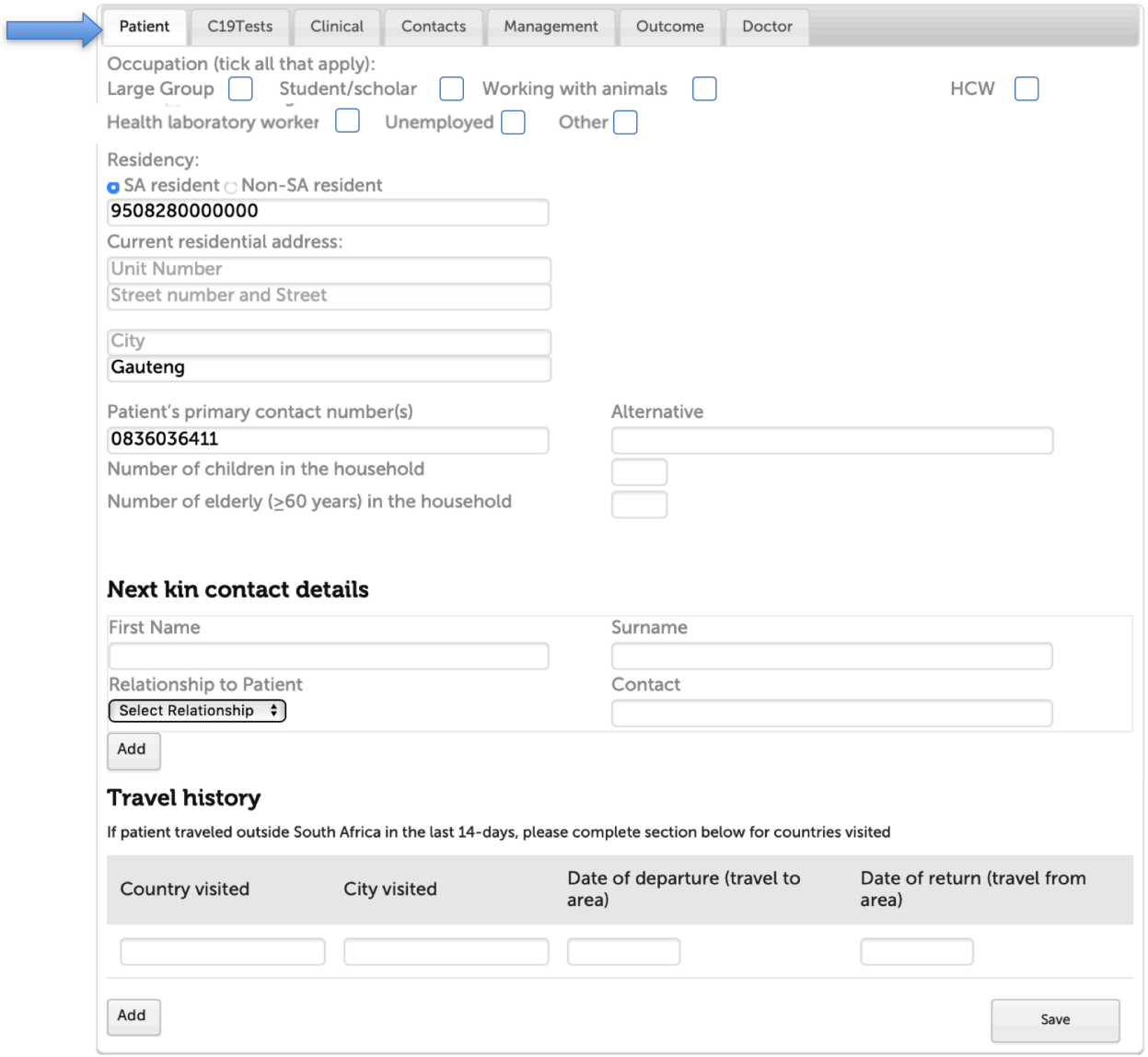
This tab shows patient demographics, next of kin and travel history.

Note: Please understand that these images are based on the specification currently being used by the Bluebird development team and the images are a little rough. These will be replaced with actual screenshots as this module goes through the development and quality assurance processes.



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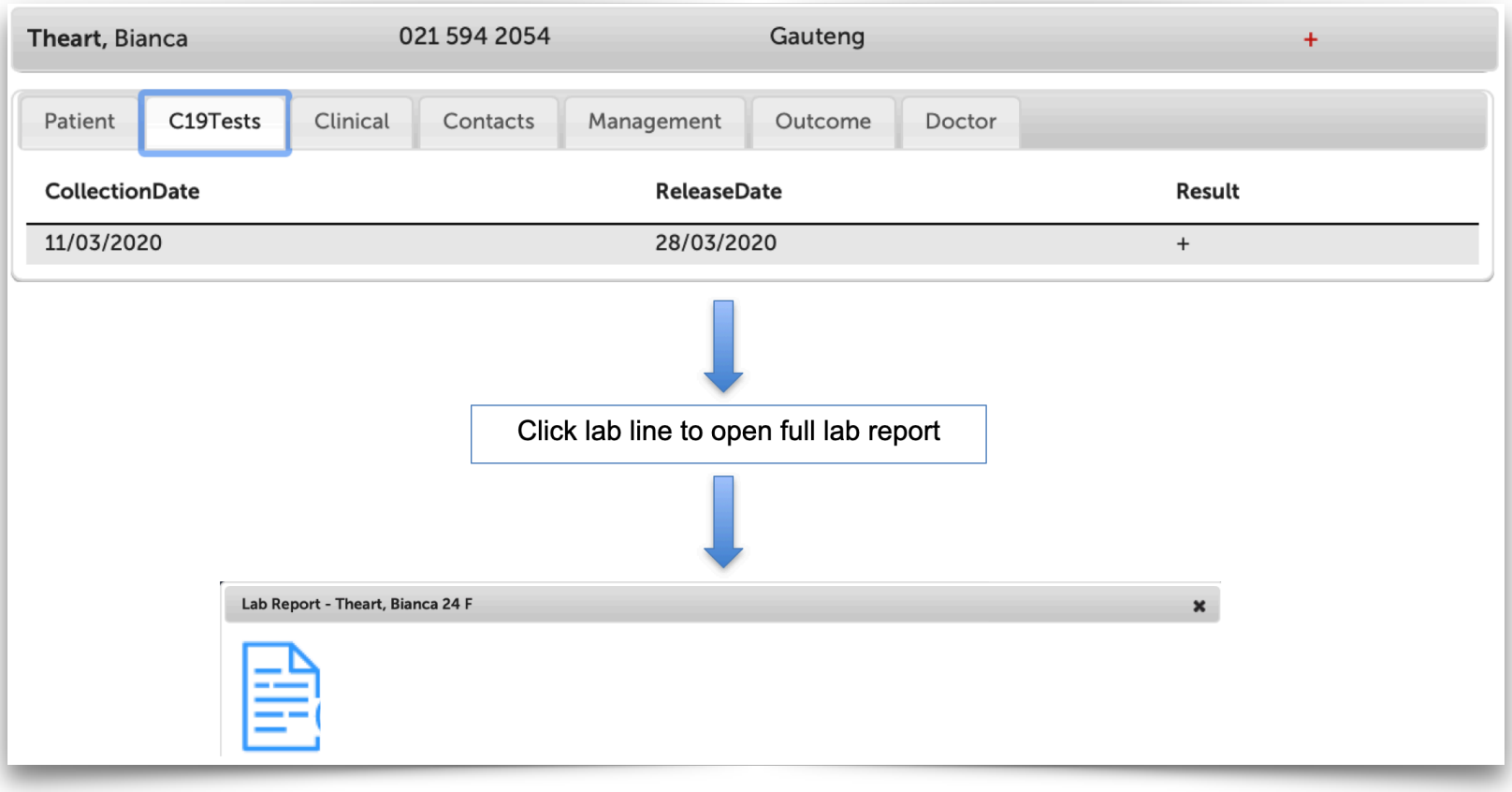
The C19 Tests tab lists all the COVID-19 tests on on this patient by collection date and gives the result.

Clicking any individual line will pop open the full lab report for that specific test.



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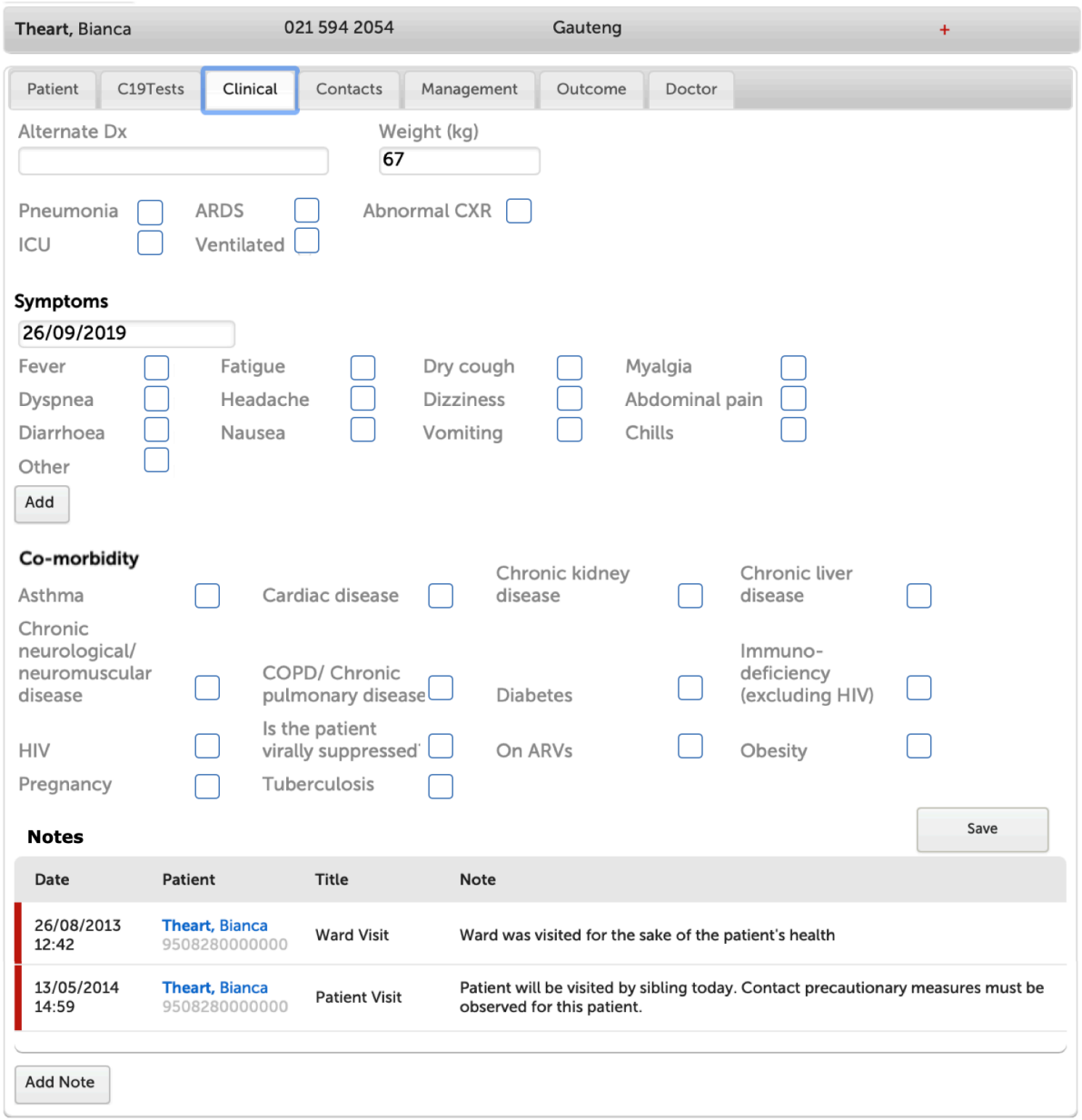
The Clinical tab is where all the relevant clinical information documented about this patient is displayed.

Note that much of this wil be collected by the GovChat interface and then automatically be displayed here.



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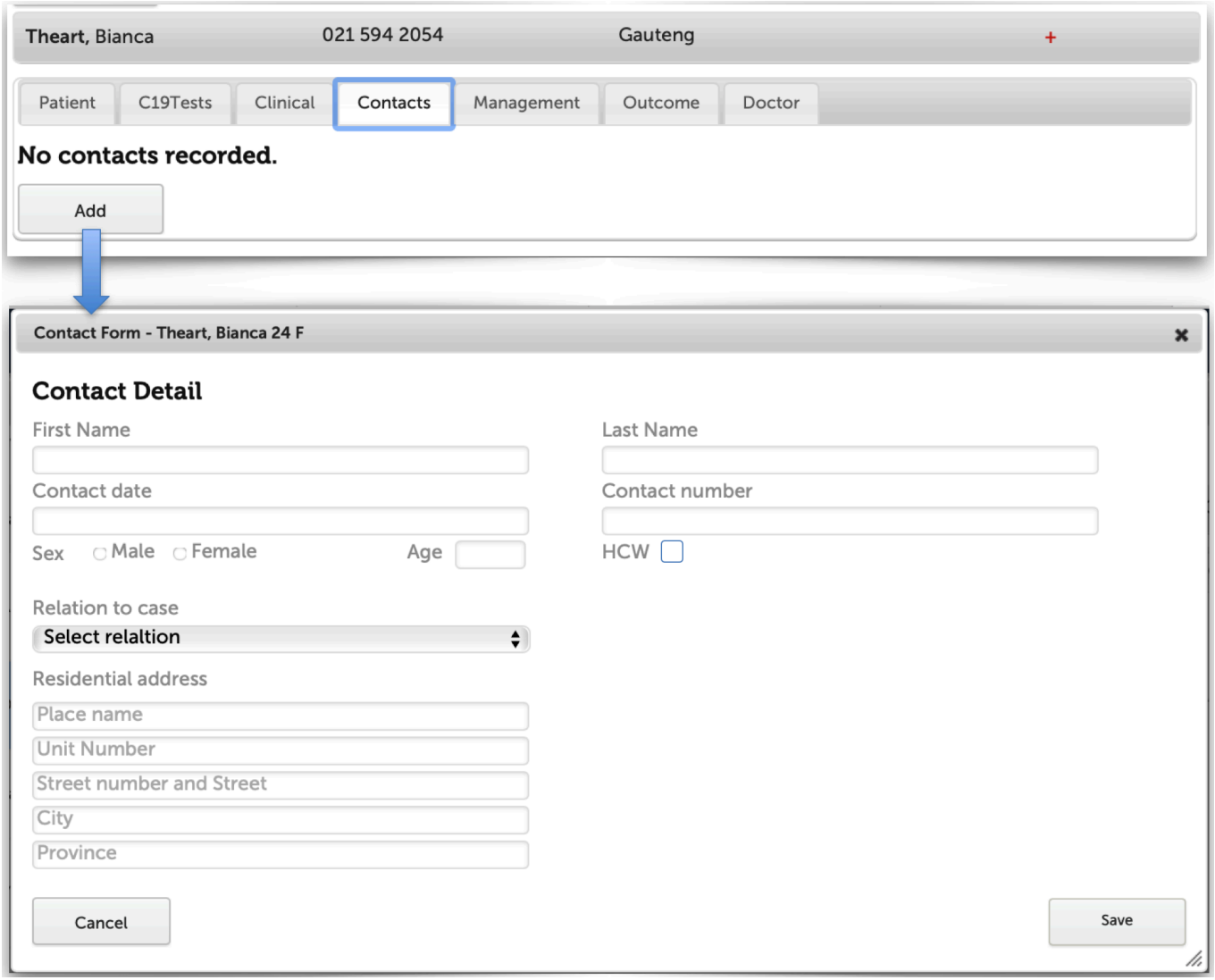
The Contacts tab shows individuals that have been in contact with this patient.



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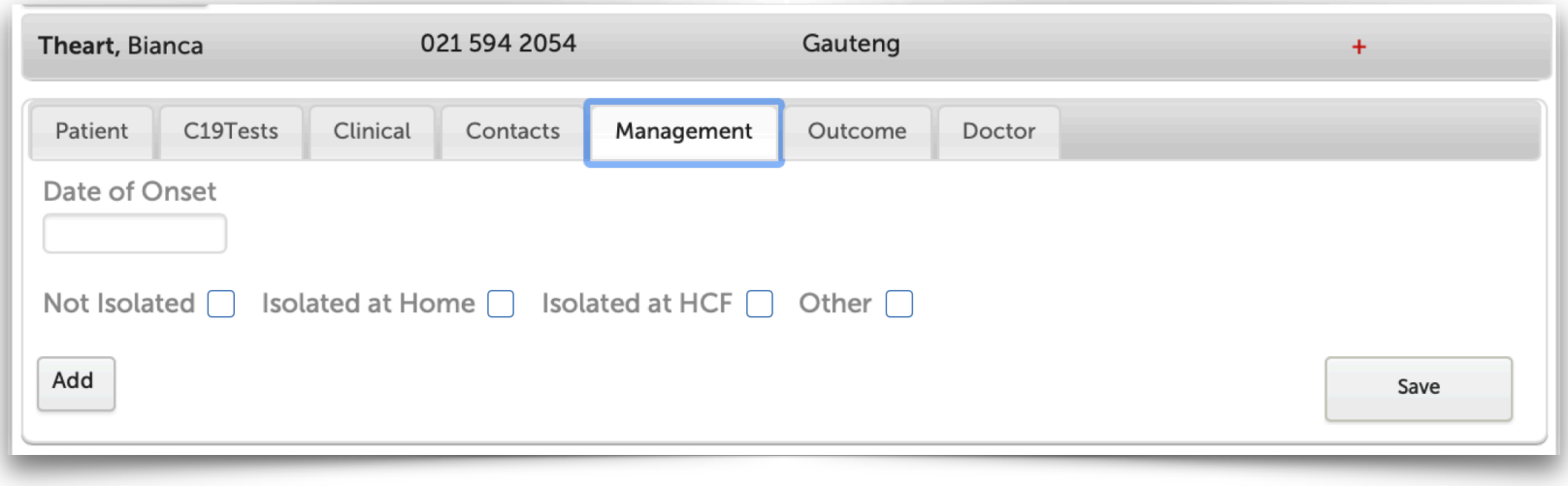
The management tab shows how this patient has been managed over time.



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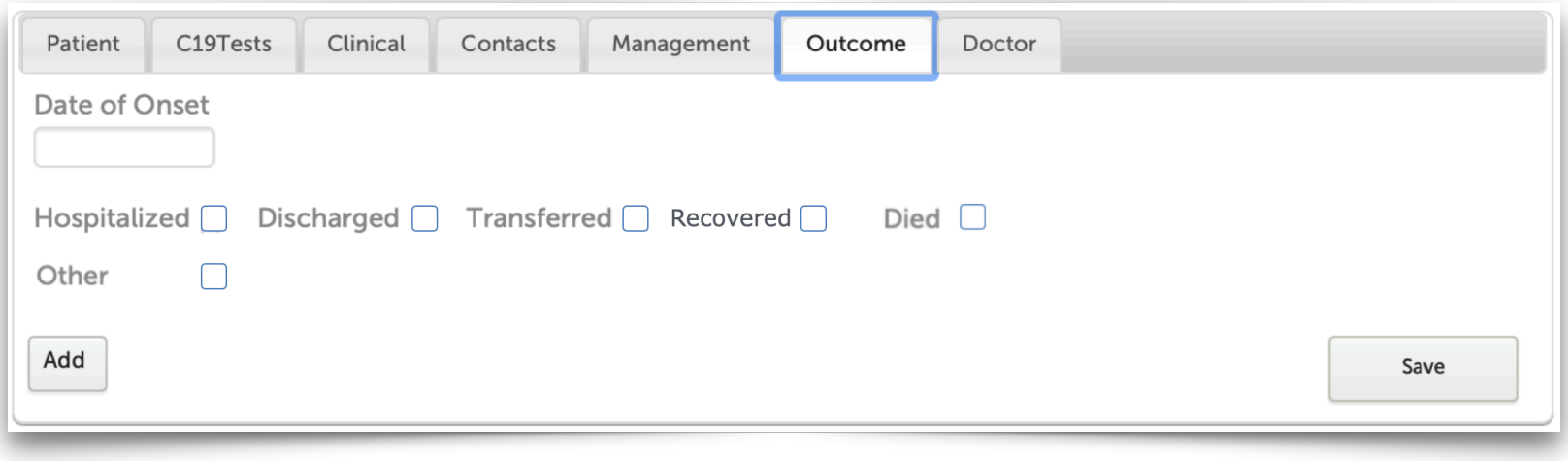
The Outcome tab shows the documented outcome at any point in time.



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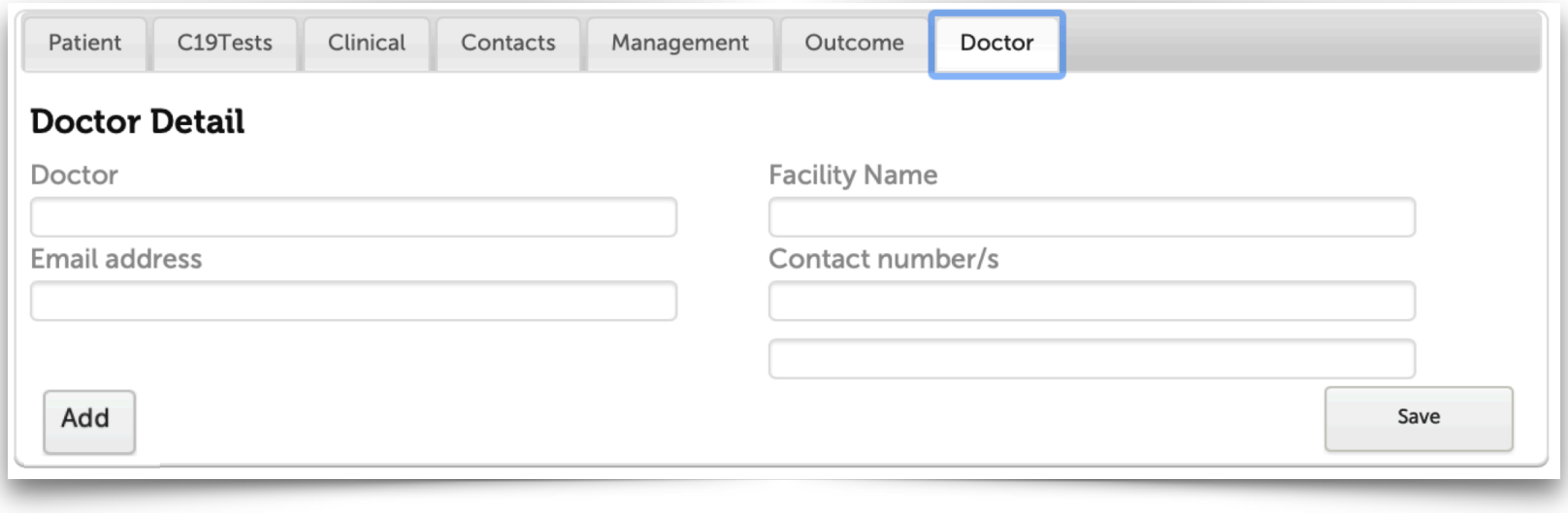
This tab allows one to add doctors associated with this patients care.



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Appendix 1: Steps that need completion by the NDoH

NDoH COVID-19 Project Owner

Please nominate the person that will be driving this project from the NDoH side and email full contact details including cell phone and email to darryl@intelms.com.

It will be ideal if this person has WhatsApp so we can send confidential information via a channel that supports end to end encryption. Until the NDoH **Authentication Gateway** is enabled, *only* the NDoH COVID-19 Project Owner will be supplied with temporary User Names and Passwords and WhatsApp will be the channel used by IMS to convey those temporary User Names and Passwords to the NDoH COVID-19 Project Owner.

The NDoH COVID-19 Project Owner will need to specify the end users that the NDoH wishes to give access to the **Bluebird DOH Surveillance and Case Management System** Users, as well as the level of access (which is role specific so roles need to be specified). IMS will need help defining those roles, but I suspect that they should be based on the NDoH geographic breakdown right down to a ward level and that users should only be able to see individual patients that fall under their geographic region? Our suggestion as to roles would therefore be:

- National (members of the National Outbreak Response Team)
- Provincial (members of the Provincial Outbreak Response Team)
- District municipality (District Surveillance Officers)
- Sub-District (Local municipality)
- Ward

Please see the **User Take-On** section below.

The NDoH COVID-19 Project Owner will also need to decide what dashboard information each role has access to, but our suggestion would be that only the National “role” has access to the current dashboard and map (later, we might be able to base dashboards on that User’e level of access so, for example, a district role would only see information pertinent to their specific district).

The NDoH COVID-19 Project Owner will also need to ensure that each hospital that the NDoH wishes to Bluebird enable (public and private) must be sent notification instructing them to become Bluebird enabled and to complete the relevant tasks specified under the **C19 Hospital User Take-On** and **Hospital Take-On (Blueprint)** sections below. Please c.c. those notification emails to ITNewHospital@intelms.com so Bluebird Operations can follow up if required.

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Authentication Gateway

This a web service that allows Bluebird to authenticate End Users against the NDoH Active Directory (or the NDoH equivalent) without giving Bluebird operations staff direct access to the NDoH Active Directory. The authentication Gateway specification allows the **Bluebird DOH Surveillance and Case Management System** users and **Bluebird COVID-19 Hospital System** users to authenticate against the nDoH's Active Directory.

This specification is available at intelms.com/authentication

The Authentication Gateway is the mechanism that empowers the NDoH to manage the authentication process for NDoH users and the hospital users that the NDoH wishes to Bluebird enable including instant de-activation of End-Users.

Fetching the COVID-19 Data from Bluebird

The specification for the API to fetch COVID-19 data from the Bluebird Server Cluster is available at intelms.com/381

In order to access this API, the Authentication Gateway specification will first need to be implemented.

The Authentication Gateway specification is available at intelms.com/authentication

The COVID-19 Data API specification currently includes the data fields (in JSON format) for COVID-19 lab data. As per the Agreement, the additional data to be retrieved by this specification needs to be specified by the NDoH and made available to IMS before the 11 May 2020.

NDoH User Take-On

The nDoH will need to complete the *specific* excel spreadsheet with the required details of each **user** that they wish to grant access to Bluebird. This specific excel spreadsheet can be found here: intelms.com/ndohusers

Please email the completed sheet to ITNewHospital@intelms.com

Please note that *only* this excel spreadsheet may be used (it is specifically designed for machine processing, the volume is too high to do this by hand).

C19 Hospital User Take-On

Each hospital that the NDoH wishes to Bluebird enable will need to complete the *specific* excel spreadsheet with the required details of each **user** at that hospital that the NDoH wishes to give Bluebird access. This specific excel spreadsheet can be found here: intelms.com/c19users. Please note that the NDoH needs to give Usernames (from their active directory) to each of these hospital Users.

For now there will only be x 4 hospital Users per hospital and the “role” will be: **C19 Admin**

Please email the completed sheet to ITNewHospital@intelms.com

Please note that *only* this excel spreadsheet may be used (it is specifically designed for machine processing, the volume is too high to do this by hand).

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Hospitals are limited to 4 users at this time, if more than 4 are supplied, the additional Users will be ignored.

Hospital Take-On (Blueprint)

Each Hospital that the NDoH wishes to Bluebird enable will need to complete the *specific* excel spreadsheet with the ward, room and bed detail. The specific excel spreadsheet can be found here: intelms.com/c19blueprint

Please email the completed sheet to ITNewHospital@intelms.com

Please note that *only* this excel spreadsheet may be used (it is specifically designed for machine processing, the volume is too high to do this by hand).

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