# NEOTREE EDITOR PLATFORM

## How to build or edit app fields and content


### Abstract

A simple guide for senior NeoTree users to make edits to the app using the simple and intuitive NeoTree web editor



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# HOW TO USE THE EDITOR

When using the editor there are 4 views / layers:

1. SCRIPTS view – (like the home page where you can see the list of scripts)
2. EDIT SCRIPT view - Here you change the pages within a script

There are two tabs within edit script view - 'SCREENS' and 'DIAGNOSIS'

3. EDIT SCREEN view - Here you can change the fields within a screen
4. EDIT DIAGNOSIS view - Here you can edit the diagnostic algorithm - n.b. not yet activated so don't worry too much about this for now.

## 1) SCRIPTS

On the left hand side panel you have various buttons which remain constant whichever view you are on

- **Admin password** – ignore this for now
- **Configuration** – relates to if pulse oximeter /BS monitor available
- **Scripts** – way to get back to scripts view from other views
- **Import Firebase** - ignore this for now.

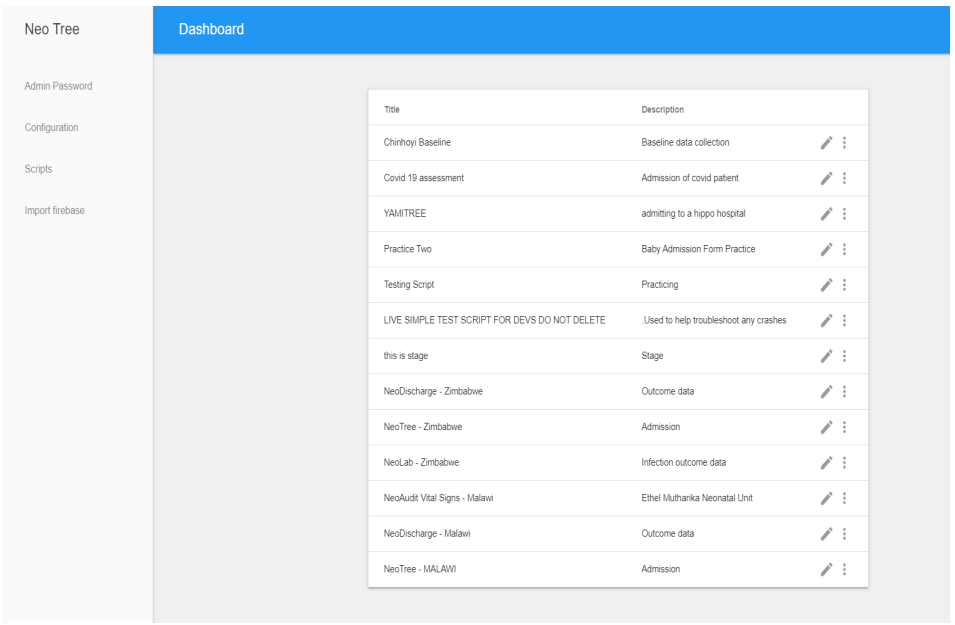
In the centre of the view you will see a list of scripts that should correspond with the list of scripts on the app e.g. NeoTree - Malawi, NeoDischarge - Malawi, NeoTree - Zimbabwe etc.

### 1.0 Check you are using the right editor connected to the right app

In the main part of the view…

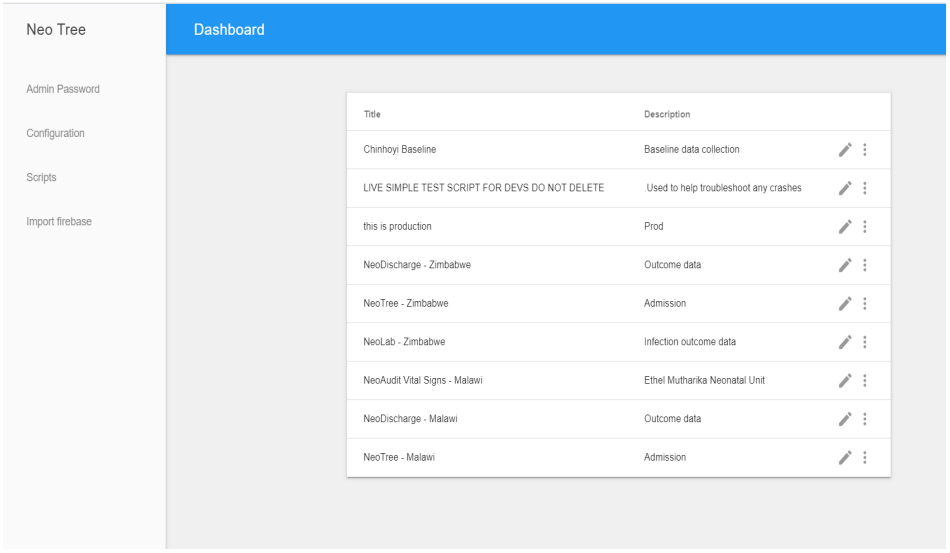
- You will see a list of scripts
- Find the '***This is stage'*** script in both the editor and the app to check that you are using the testing version of the editor and app.

Figure 1: Editor in Test Mode




- Find the '***This is production'*** script in both the editor and the app to check you are using the real live version of the editor and app.

Figure 2: Editor in Production Mode




## 1.1 Add a new script or screen

- To add a new script click the big yellow '+' button on the bottom right
- To add a new screen click the grey '+' top right of the list of screens

### 1.2 Edit an existing script or screen

- To open/edit an existing script click on the pencil icon – far right of the script cross bar
- To open/edit an existing screen - again click on the pencil icon - far right of the screen cross bar

### 1.3 Delete a script or a screen

***(DO NOT DO THIS!)*** but to be aware of how to ...

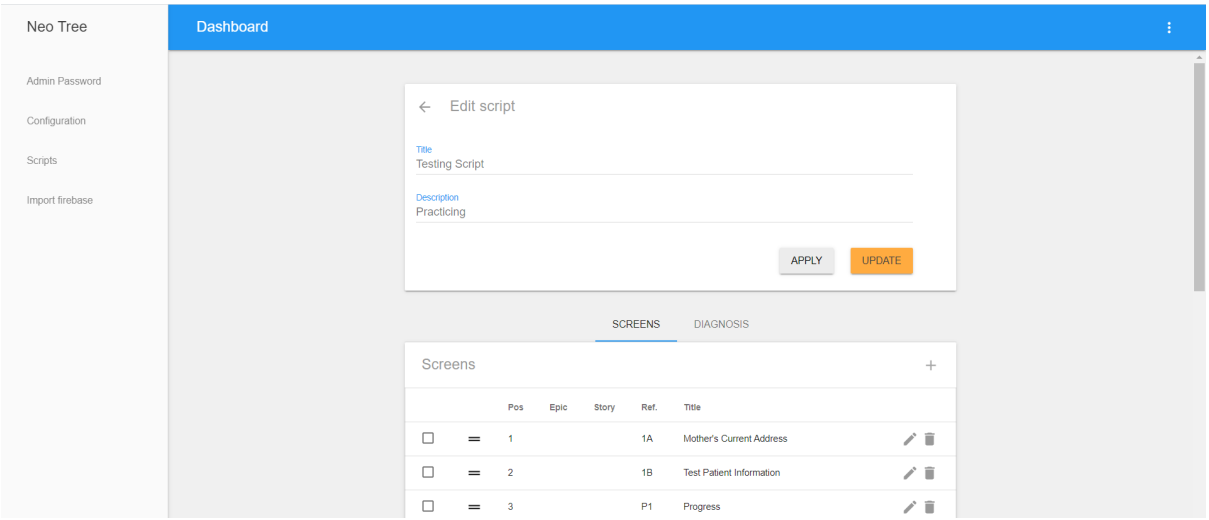
- If theoretically you wanted to delete a script ***(DO NOT DO THIS!)*** in the 'Scripts' view click on vertical 3 dots – far right of the script cross bar and choose 'delete'.
- To delete a screen within 'Edit Script' view you would click on the dustbin icon far right of the screen cross bar

## 2) EDIT SCRIPT

This view will show when you create a new script or edit an old script. You will see **title** and **description** fields at the top which correspond with the scripts showing on the app.

Then there are 2 tabs – **Screens** and **Diagnoses** – the page will default to 'Screens' rather than diagnosis. These 2 tabs are linked by the algorithm which I'll come back to later

Figure 3: Edit Script view



## 2.1 Script navigation labels explained

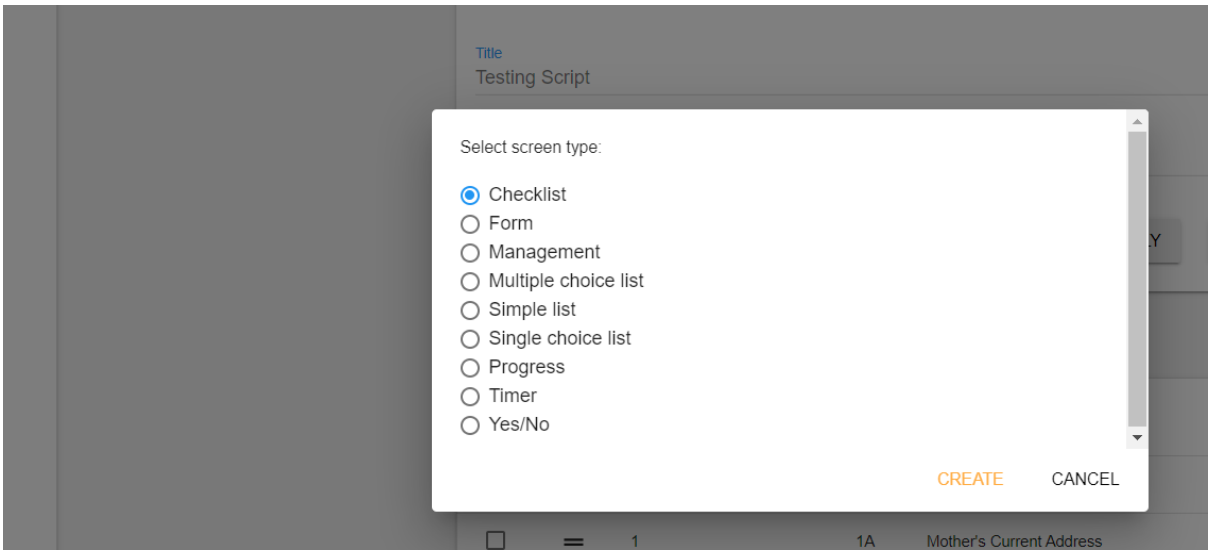
In the **'Screens'** tab: **Pos, Epic, Story, Ref, Title** fields on the Edit Scripts view are reference/navigation labels for keeping track of which screen you're on. They are not compulsory and you don't need to use them at all but they are useful for navigating your script and ordering screens later

- '**Pos**' = position ie. the number of screens you are on and increments from 1 up until as many scripts you need.
- **Epic** & **Story** = You can enter these if relevant but they may not be
- **Ref** = reference – like a quick reference reminder of what's on that screen
- **Step** = You can use this to track steps in a sub-section of the script however this field is not really used so may be removed in future versions
- **Title** = This is just title of the screen

## 2.2 Add a new screen

To add a new screen to your script click the '+' button on the right and choose the type of screen you want:

Figure 4: Add New screen types



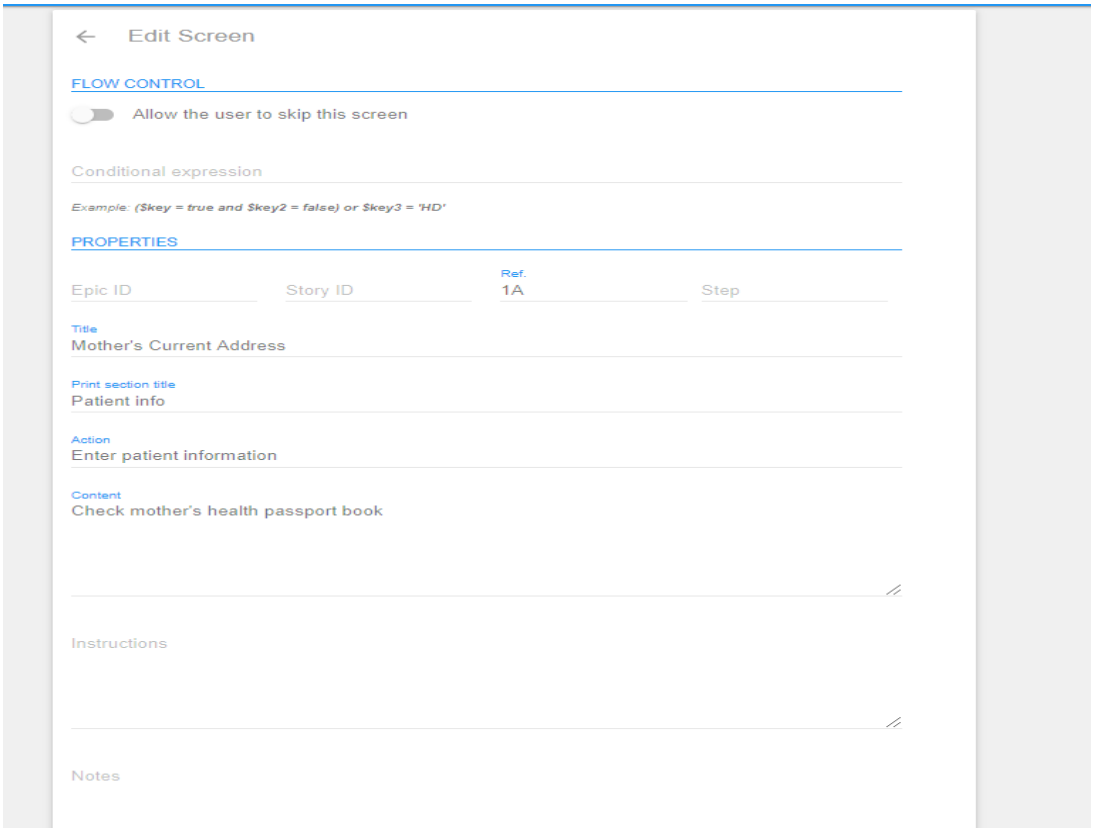

## 2.3 Types of Screen (and fields):

1. **Check-list**
2. **Form**, includes field-types:
    a. Date,
    b. Date+time
    c. Dropdown
    d. Number
    e. Text
    f. Time
    g. Time Period
3. **Management** (includes 3 sections with text and pictures but no actual fields)
4. **Multiple Choice List** (MCL) - (can select more than one option)
5. **Single Choice List** (SCL) (better alternative to a drop down as less clicks)
6. **Progress** (how much progress the user has made through the app)
7. **Timer** (e.g. for timing respiratory rate)
8. **Yes/No** (Any question with a binary answer e.g. black/white, e.g. Big/small)

If you want to have more than one field on the same page – choose 'form' all other types of screen will only allow one type of field (essentially the screen is the field)

# 3) EDIT SCREEN

Figure 5: Edit Screen View

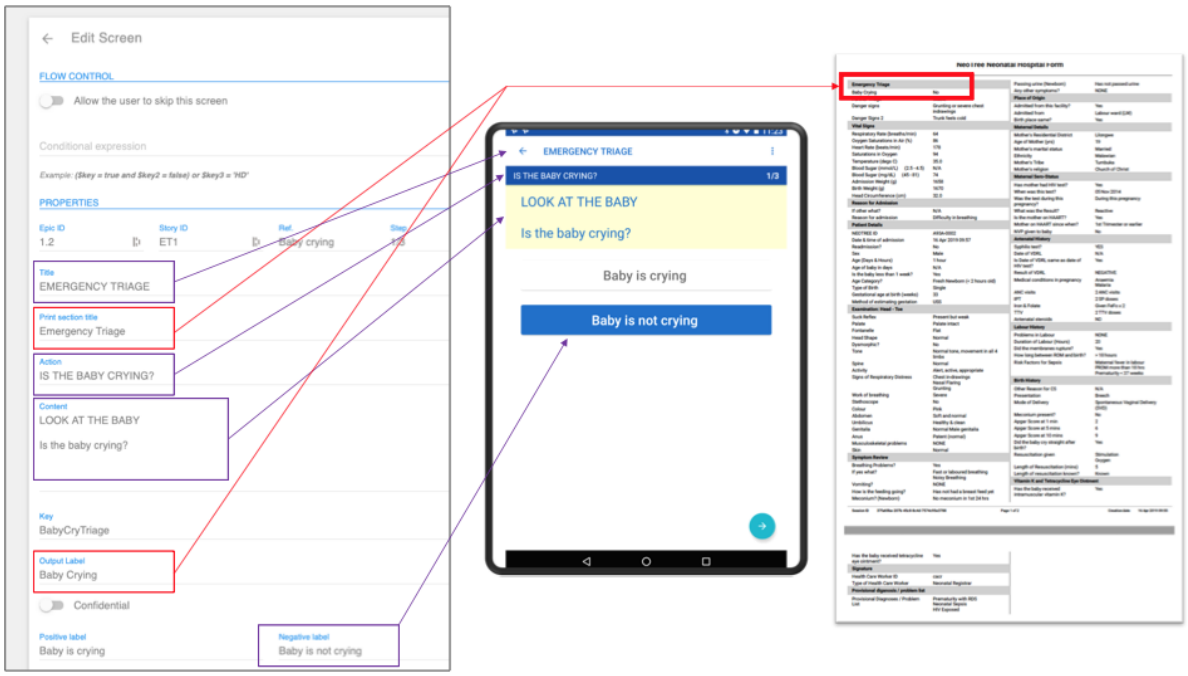



**Once you've selected the type of screen you want - complete the following:**

… **Epic, Story, Ref, Title** fields on the 'Edit screen' page directly correspond to the reference fields on the 'Edit Script' page – and can be edited here as you build your script. These are mainly for you to label your script pages and keep track of where you are – they don't affect the app or print out – keep them short and sweet.

It is Important to always fill in red fields (title and print section title) or the app with crash! Try to avoid trailing spaces as this has been known to cause crashes also.

Figure 6: How editor fields relate to the app and print-out




- **Title** – will show as blue writing in top white bar of the app
- **Print section title** – this will show up on the print-out only (not the app) – keep the same for all info you want under one title
- **Action** – shows in the blue bar on the app – please complete for <u>all screens</u> to keep consistency of the user experience, this is mostly in question format.
- **Content** – any additional instructions or info for the user will show in yellow area on app, you may just leave this blank, instructions are optional.
- **Key** – what appears at the top of database column – must be unique within a script and no spaces or funny characters – keep these short to make easy viewing in database, in the same format e.g. String of ~3 letter shortened words in lower-case with first letter of each word in caps,, joined together with no spaces.
- **Output label** – label within that column (usually same as key but can be written out and have spaces) this will show on the left hand side of the print out
- **Instructions** - this field does not actually show in the app but can be used for reference notes

- **Notes** - similarly if you need to leave notes here for only users of the editor to see then do so

When you are using the editor to add new fields or change existing fields - Always think about (&/or check) three things;

1) ***The app*** (Does the App interface make sense and is it consistent with previous pages?)
2) ***The printout*** (Do the titles and labels make sense on the printout?)
3) ***The database*** (Are all my key names unique, without spaces & will they make sense at the top of my data columns?)

## 3.1 Make pages optional

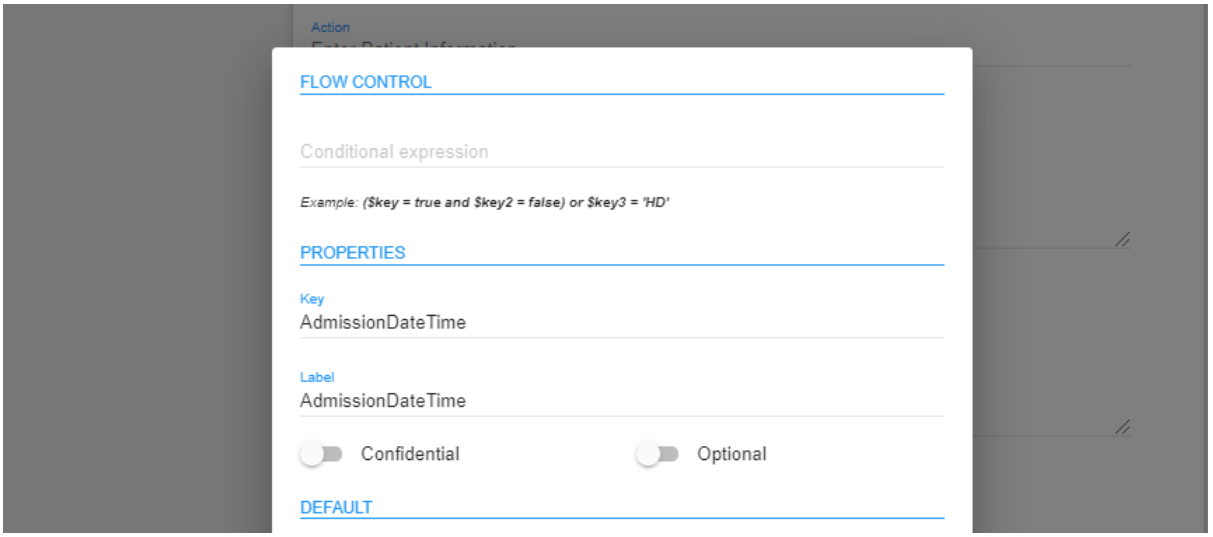
Click the slider to on for 'allow the user to skip this screen'

This will mean the blue arrow shows in the bottom right corner of the app page even if that question hasn't been answered - hence the user can leave that field blank and still move on through the app

## 3.2 Make information confidential

Confidential - change this slider to on if that field's information is sensitive or might identify the patient e.g. date of birth, address etc - all these should be confidential.

Figure 6: Confidential and Optional buttons

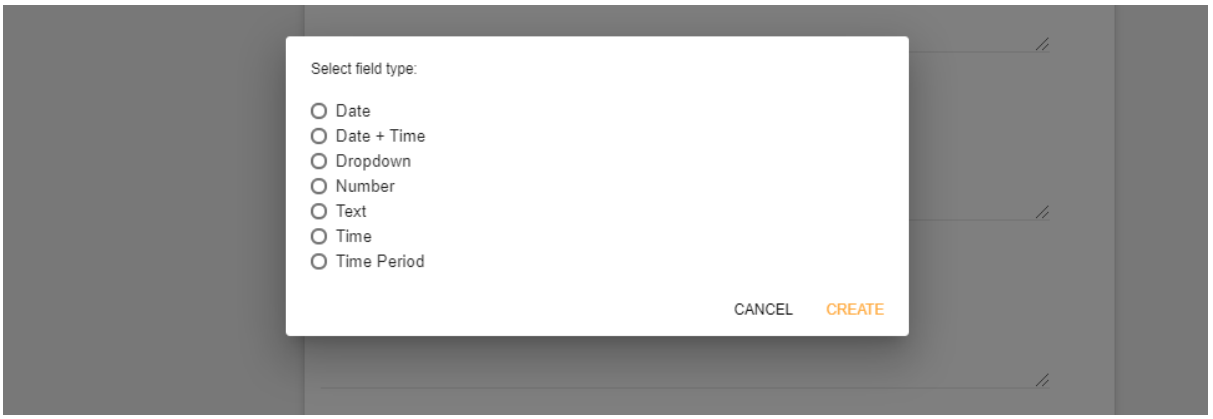


## 3.3 Add fields to your screen

**The add fields or choices in the bottom section**

On a 'form' screen you get the option of adding different types of fields in the bottom section using the '+' on the right of the view. These include:

Figure 7: Field Types




## 3.4 Types of field (within a form)

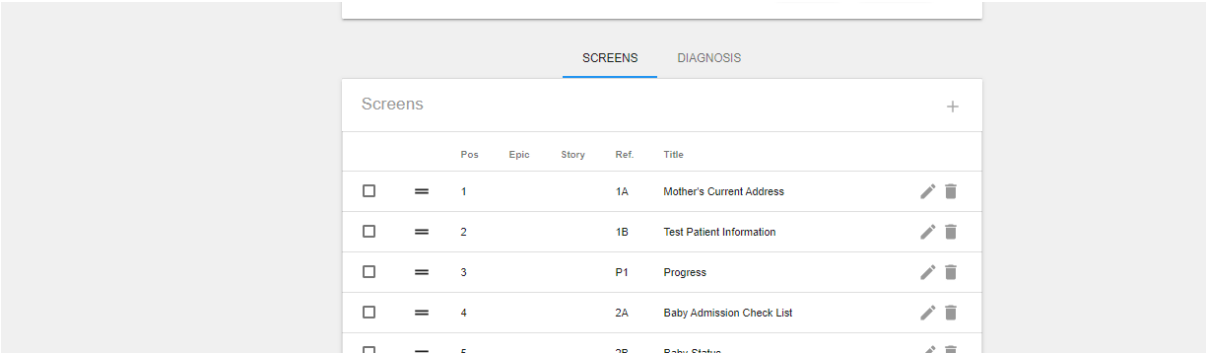
1. Date
2. Date + Time
3. Dropdown
4. Number
5. Text
6. Time
7. Time Period

For other types of screens, where necessary, the bottom section is used for adding choices (e.g. multiple-choice lists)

## 3.5. Change the order of screens or fields

You can use the 2 lines on the left of the bar of screens or fields to drag and drop screens or fields to the new desired position. Just click on the lines at the left of the bar, hold and drag the screen or field up and down the list.

Figure 8: Order of screens




## 3.6. Create an ID field that generates an ID

An ID field will be of the type 'text' and can be created within a 'Form' screen-type.

When you create the text field at the bottom of the field window - check the 'generated ID' option. This will automatically create an ID number and any further ID's generated within that script in the future will sequentially increase in number. The letters in the first half of the ID will remain the same for any sessions completed on that particular tablet. For these fields please set the Key as UID_S.

## 3.7. Create a calculated time period (e.g. age)

Select field type 'Time period'

Enter the expression $keyχ, where time period = current time - keyχ

In this way you can calculate the age of the baby from the current time on the tablet and the date and time of birth of the baby. N.B this will only work for neonates < 7 days of age.

## 3.8. Create a timer screen (& calculate HR or RR in bpm)

If you want the app to calculate HR or RR in 1 minute from a count in a smaller time period you need to select 'Timer' as the screen-type

Fill in the number of seconds you want the user to count for (Timer value in seconds) and the number of times that count will be multiplied (multiplier) and then the minimum and maximum values of the final value (input value min. and input value max.)

E.g if you want RR in bpm from 15 seconds of counting :-

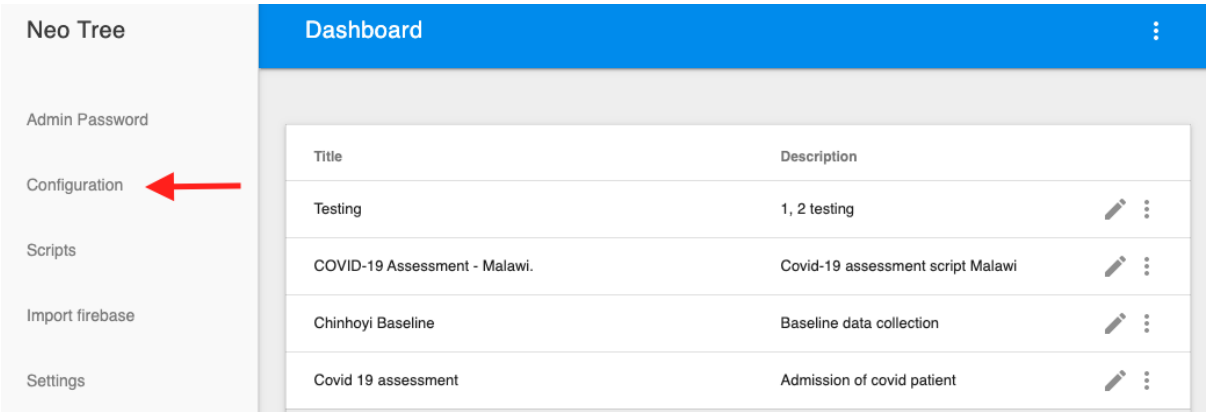
Timer value in seconds = 15

Multiplier = 4

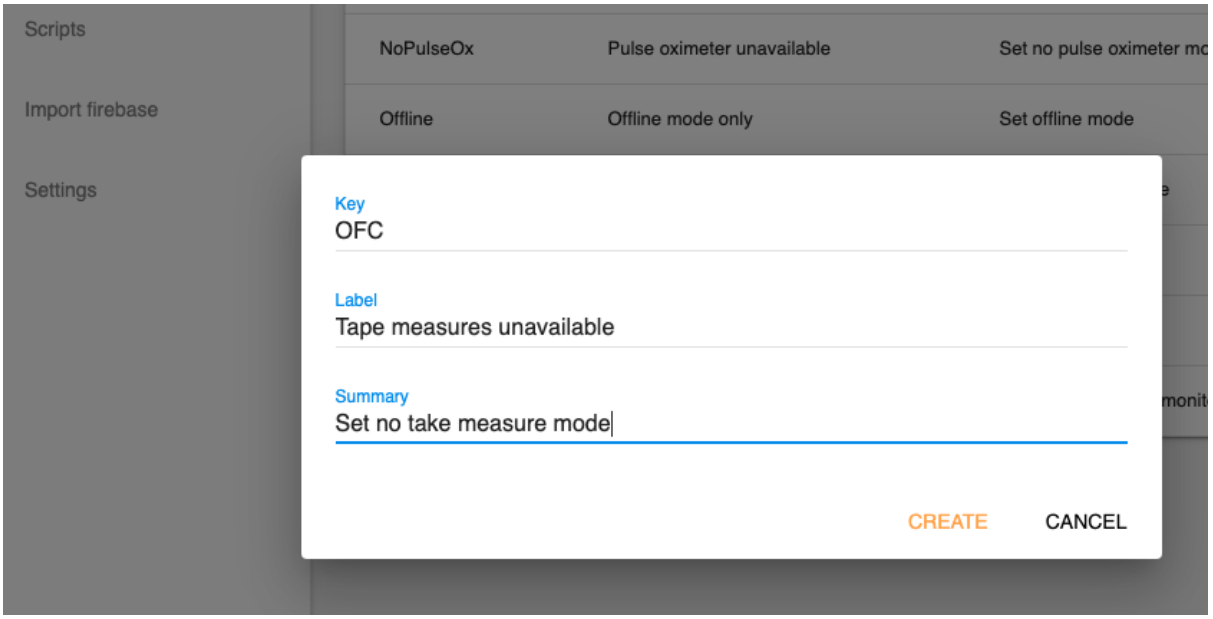
Input value min. = 0

Input value max. = 200

## 3.9 Add a new configuration according to available resources




On the main page of the editor, within the left panel there is a 'configuration' option. Here you can add configuration depending on a resource that might be unavailable. For example if tape measures are unavailable then you can enter the key '**noOFC**' (so the head circumference field 'OFC' (Occipito-Frontal-Circumference - for which a tape measure is required) will be removed from the script. Then add the conditional expression **$noOFC = false** at the top of the OFC field screen. (pic below should say noOFC - needs updating)




## 3.10. Make a page or field dependent on a particular condition

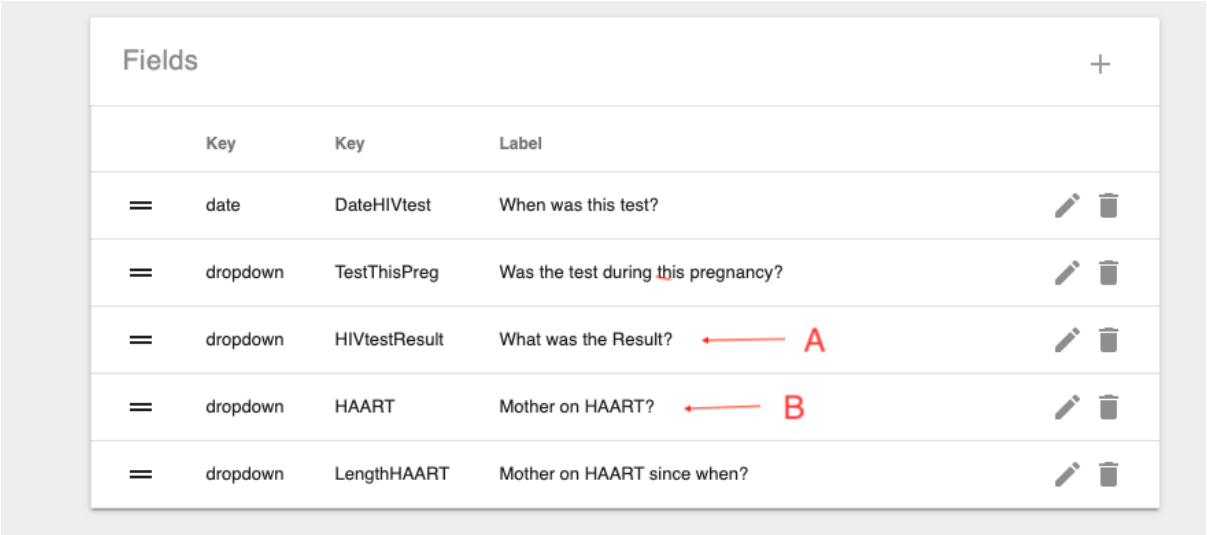
To make a page or field appear depending on another field or a particular condition you can use condition expressions. Conditional expressions can be applied at the **screen level** or the **field level**.

### 3.10.1. Page-level conditional expressions:

If you enter a conditional expression at the top of a page then that page will not appear unless that criteria is fulfilled. For example if you add the conditional expression $BabyCrying = false at the top of the helping babies breathe page, that page will only appear if the baby is not crying . If the baby is crying then this page will not appear. This conditional field was added to the NeoTree because if a baby is crying then it is more than likely that their airway patent. Babies who cry have normal airways and they are very unlikely to need resuscitating with the 'helping babies breathe' page of the app.

### 3.10.2 Field-level conditional expressions:

If you apply a conditional expression to an individual field then that field will show grey on that page until the criteria is fulfilled. For example $HIVTestResult = 'R' will allow the next field; 'is the mother on ART?' to show blue rather than grey. If the mother is negative then that field will remain greyed out so the user does not need to complete it. Hence in the editor field B is dependent on A being positive.

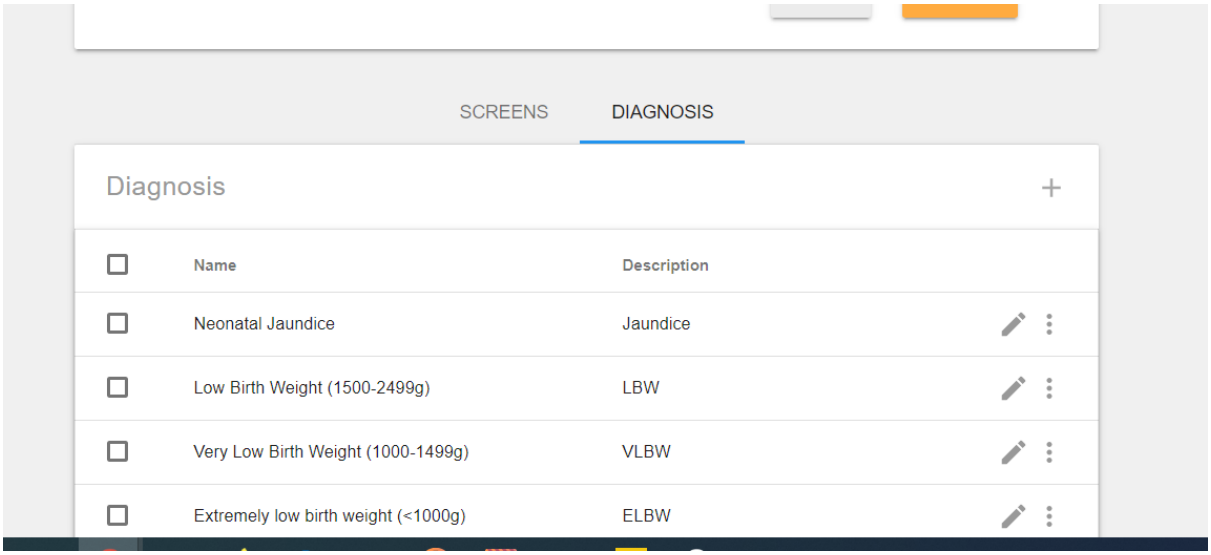



## 4) EDIT DIAGNOSIS

Screens and diagnosis tabs are linked by the algorithm

For example, if you click on NeoTree Zim admissions – and then diagnosis tab the top diagnosis is Jaundice. Go into the Jaundice diagnosis by clicking the pencil far right.

Figure 8: Edit Diagnosis

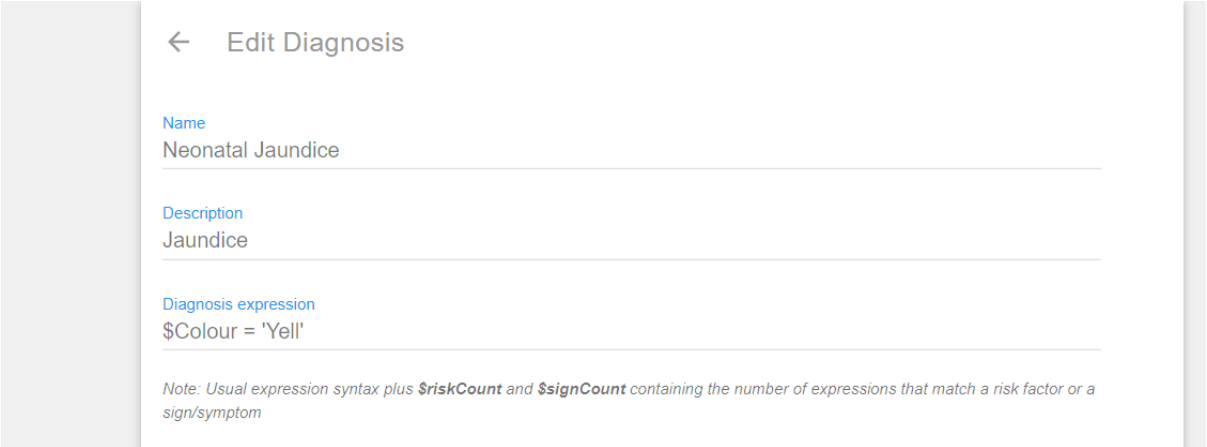



Under '**conditional expression'** you will see $Colour = 'Yell'.

This generically speaking is $Key = 'ID'

If you go back into **Screens** and find Screen 51 – you will see Key = Colour and ID = Yell

Figure 9: Edit Jaundice



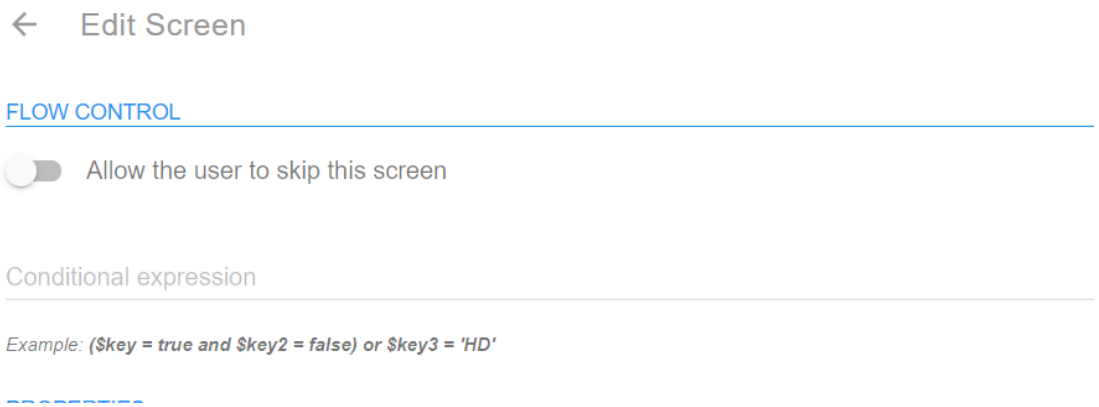

## 4.1 Conditional expressions for the algorithm

- For Yes/No questions:

  $Key = true

  $Key = false

Figure 10: Conditional expressions




- For dropdowns / multiple choice questions

  $Key = 'A'

- When you want more than one cluster of signs/symptoms in the expression use '**and**'
- When you want 1 set of symptoms or another - use '**or**'

- Remember to put brackets to group symptoms/signs into different presentations
- For groups of risks or signs to add up to a total with different weightings

  $riskCount = 1

  $signCount = 1

- When you want to include all the possibilities to a question answer except one

  $Key != 'A'

## 5) IMPROVING THE EDITOR

### How to communicate bugs or issues in the editor to the tech team

Example issue: while you should not create two key names exactly the same, it is still possible to do this within the editor. If you wanted to ask the tech team to provide field validation on the 'key' field in the editor to make it impossible to input a repeat key name, then you could express it as a traditional story, as follows:

> ***As a*** *user of the editor* ***I need*** *field validation on key fields indicating when I have entered a repeat key name* ***so that*** *I am prevented from entering two keys the same, human mistakes are avoided and time is saved in cleaning the data.*

Stories should be sent to the devs with a clear explanation of what the problem is accompanied by screen-shots where possible.