



# staffing *methodology*

## Software user guide

### *FTE calculation*

Unclassified

## Version control

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## Introduction

This User Guide has been written to help navigate the tabs and populate the Staffing Methodology software and Milestones reporting data fields. The following pages provide a step-by-step guide to inputting data into the software. The User Guide is laid out in steps that follow the same sequence as the layout of the software. Detailed information on how to work out available staffing hours are contained in Appendix 1.

The User Guide has been written for all software users – DHB, Health Union and Safe Staffing Healthy Workplaces (SSHW) Unit. Depending on your access permissions, certain parts of this User Guide will be of more interest to you than others.

You will have been set up as one of four types of Users, as follows:

1. DHB Site Administrator – DHB system administration, read and write access to all tabs and studies to the main menu.
2. DHB Read-Write – enter data into studies that have already been set up.
3. View Only – view only studies that have been shared with you. The study can only be shared by the DHB Site Administrator or DHB Read-Write User.
4. SSHW Programme Consultant – read-write access to studies that have been shared with you by the DHB Site Administrator or a DHB Read-Write User.

You will be advised what user type you have been assigned by either the DHB Site Administrator or SSHW Administrator. For further information on access permissions, please refer to the Standard operating procedures for CCDM software. Software Business Administration Rules.

The User Guide is one of several resources available for FTE calculations. Please contact your SSHW Programme Consultant for supporting documents or more information.

## Before you start

Before you start doing an FTE calculation, you will need to gather the data listed in Table 1. For those experienced in undertaking FTE calculations this list will be familiar to you. If you need further guidance, refer to the User Guide page number listed in Table 1 below. There is also an optional FTE Calculation Data Request Schedule (available from your SSHW Programme Consultant or the CCDM website), designed to help you:

1. Manage data requests from multiple sources.
2. Gather all the data needed for the software in one place.
3. Sequence the data in a way that makes it easy to transpose it into the software.

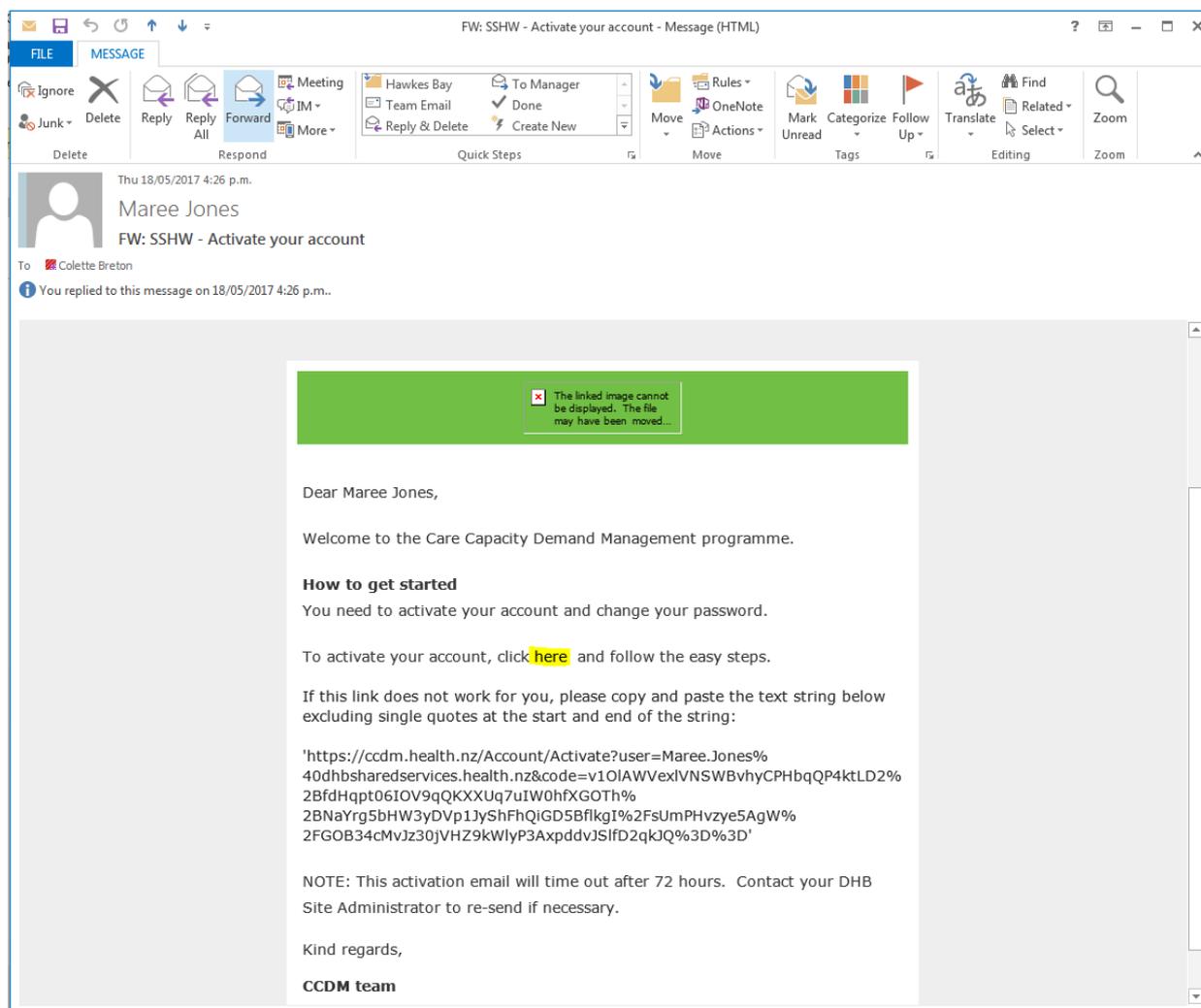
When accessing the software, you must use Internet Explorer 11, or the latest version of Google Chrome or Firefox. Older web browser versions may let you enter the site but will not work correctly.

*Table 1 - Software Data Requirements for the FTE Calculation*

✓	Required data	Definition	Page
<input type="radio"/>	<b>TrendCare Ward Name and Ward Code</b>	The name and code in TrendCare that is assigned to the ward/unit.	12
<input type="radio"/>	<b>TrendCare reports (Saved as .csv files)</b>	Ward Period Shift Variance Ward Patient One on One Care Ward Roster Re-engineering Ward Productive and Non-Productive Hours Report Ward Acuity HPPD Per Patient Type Ward Discharge Summary Ward Admission Summary Ward Period Transferred In Ward Period Transferred Out	27
<input type="radio"/>	<b>Patient One on One Care</b>	The decision to include/exclude Patient One to One Care depending on ward/unit context	19
<input type="radio"/>	<b>Budgeted Base FTE</b>	By role – i.e. roles that provide direct and indirect patient care 7 days per week, 24 hours per day (e.g. DSN/DSM RN/RM, EN, HCA)	21
<input type="radio"/>	<b>Budgeted Additional FTE</b>	By role – i.e. roles that are supernumerary or not required 24/7.	22
<input type="radio"/>	<b>Minimum Base FTE</b>	The minimum FTE required to cover the ward/unit for each shift (AM, PM, N).	22
<input type="radio"/>	<b>Rostered Base Hours</b>	By role (DSN/DSM, RN/RM, EN, HCA), by day (Monday to Sunday) and for each shift (AM, PM, N). Include hours required for direct and indirect patient care 24/7. Exclude shift coordination.	23
<input type="radio"/>	<b>Rostered Shift Coordination Hours</b>	Hours of shift coordination per shift as agreed by the DHB/documentated in the TrendCare Business Rules.	23
<input type="radio"/>	<b>Rostered Additional Hours</b>	By role (CNM/CMM, NE/ME, CNS etc.) and by day.	24
<input type="radio"/>	<b>Expected turnover FTE</b>	This is the expected turnover as FTE for the upcoming 12 months, calculated for each of the base roles from retrospective data.	57
<input type="radio"/>	<b>Expected FTE of new graduates</b>	This is the expected number of new graduates as FTE for the upcoming financial year.	57

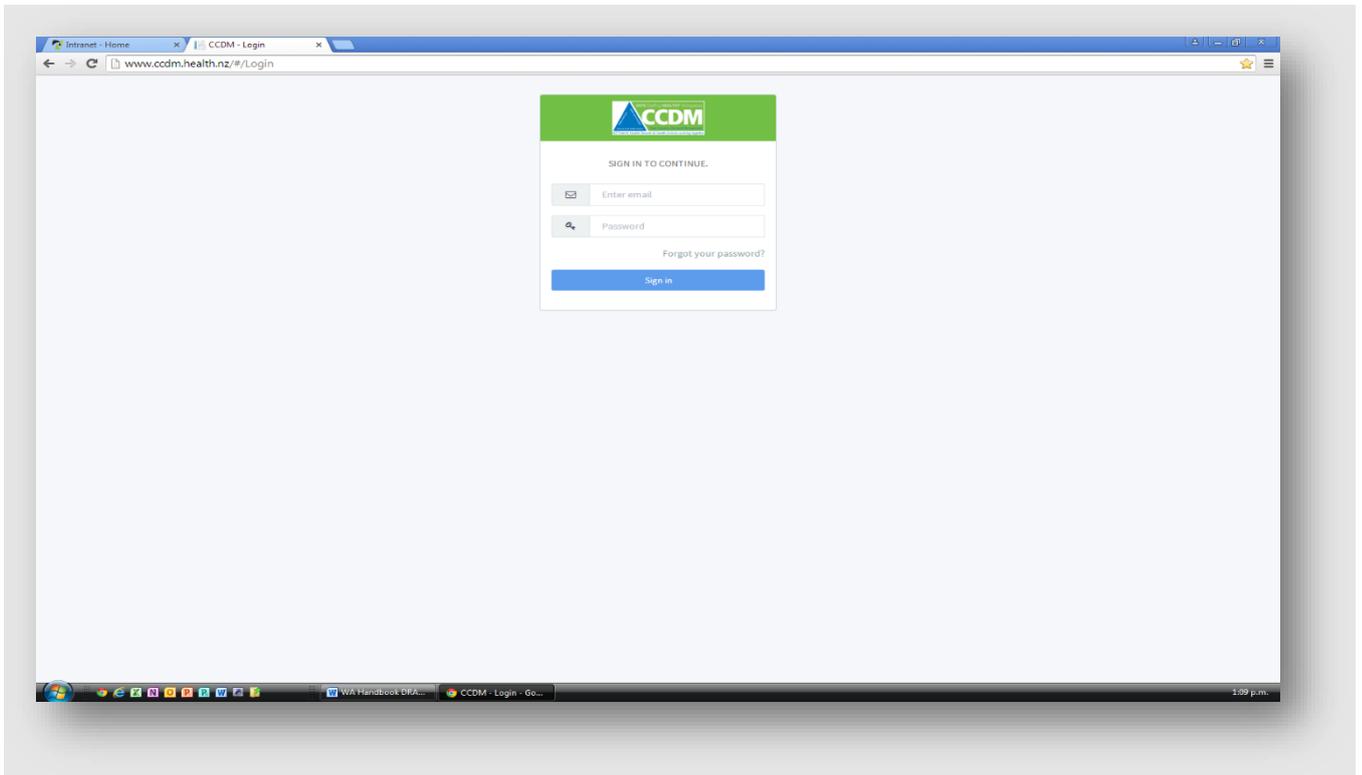
## Step 1 – Login

The first time you login to the software, it will be via an account activation email. Make sure your default browser is Microsoft Edge, or the latest version of Google Chrome or Firefox. (Older web browser versions may let you enter the site but will not work correctly). Click 'here' on the email as instructed. This will take you to a login screen to enter your email and choose a password (entered twice) to activate your account. Retain your password for future use.



The activation email 'times out' after 72 hours. If you are attempting to enter the system after this time, an error message will be generated. The activation email will need to be resent by the DHB Site Administrator (for all DHB users) or SSHW Unit Administrator (for SSHW Programme Consultants, union and DHB Site Administrators).

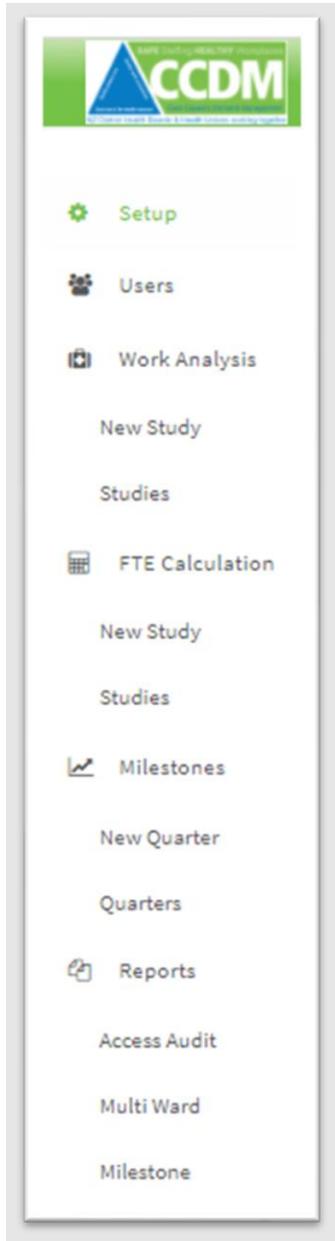
When you login a second time, you will need to navigate to <https://ccdm.health.nz/#/Login>. Enter your email and password, click [Sign in](#). Every time you log in to the software, press the [Ctrl] + [F5] keys together. This will reload the web page and ensure any updates since you last logged in are applied.



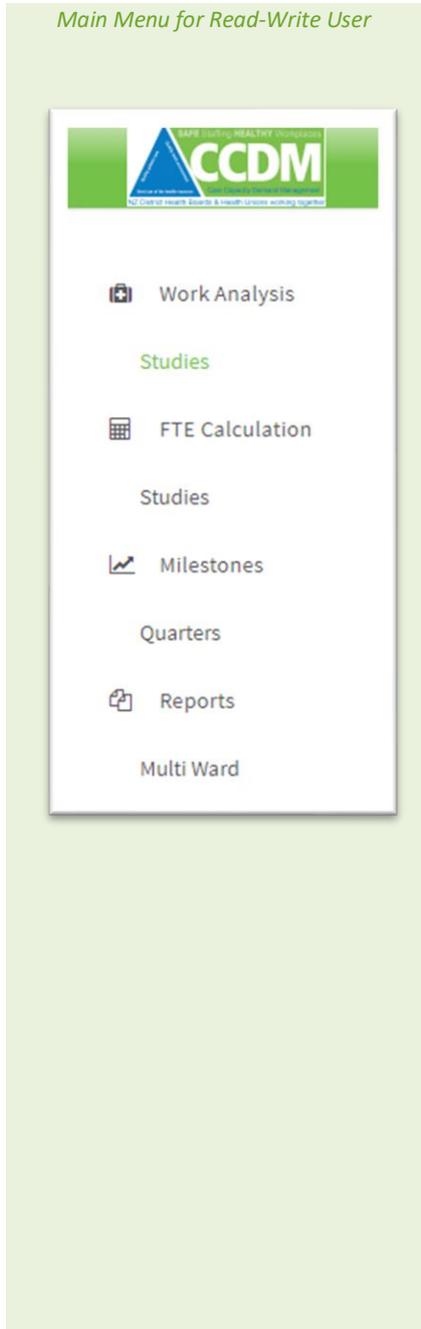
If you have forgotten your password, click on 'Forgot your password'? The software will send you an email allowing you to reset your password.

Once in the software, the web page layout will vary depending on your access permissions. The person who set you up in the system will advise what user role you have been given. The table below shows what the main menu will look like for different users.

*Main Menu for DHB Site Administrator*



*Main Menu for Read-Write User*



*Main Menu for View Only User, Health Union View & SSHW Programme Consultant*



**User tip 1 – Basic trouble shooting**

For all unexpected software performance (e.g. slow, incorrect display, not saving) try one or all the following:

- Check the software has opened using Microsoft Edge, or the latest version of Google Chrome or Firefox
- Press [Ctrl] + [F5] to refresh the web page
- Logout of the software and log back in
- Logout completely of your computer system and log back in

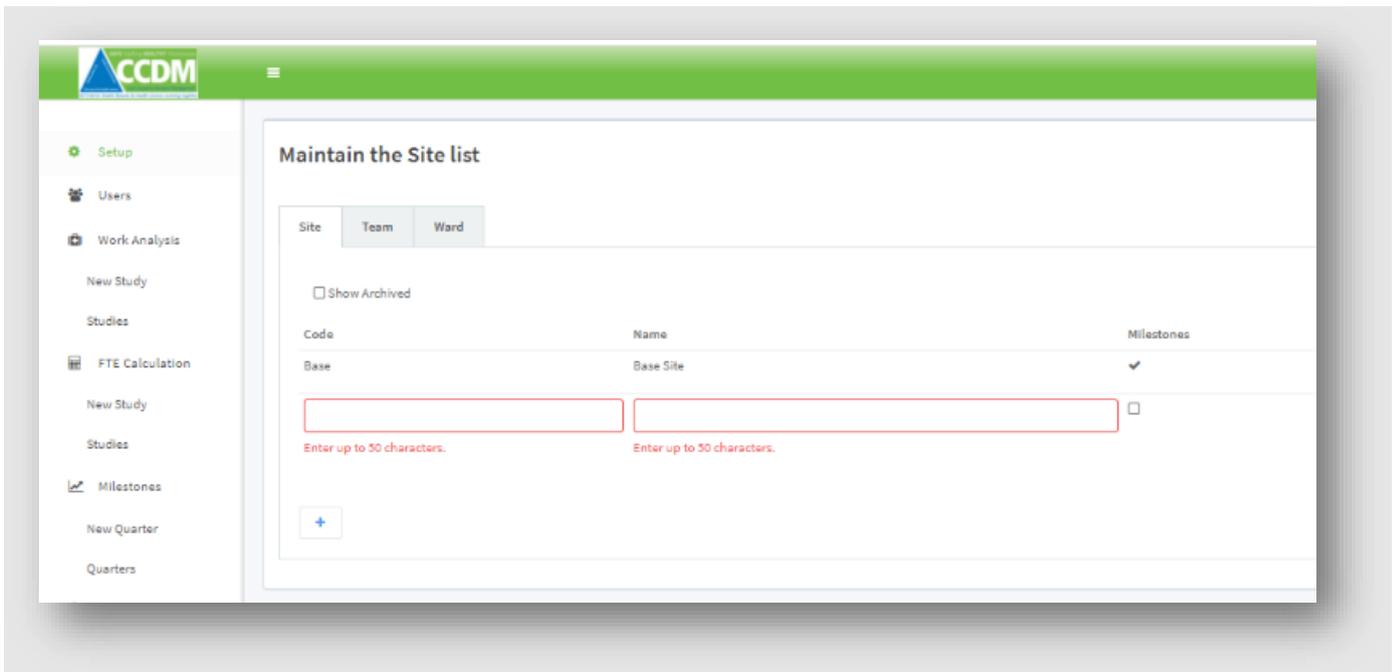
If these actions do not resolve the issue, contact your SSHW Unit Programme Consultant. If emailing, please provide a clear description of what the problem is, how it came about and provide a screen shot of any error messages.

## Step 2 – Site, Ward and Team Setup

This step can only be carried out by a DHB Site Administrator. Other users will not be able to see the **Setup** in the main menu. Each site (or campus) within a DHB must be entered into the software so wards and teams can be allocated to the site they are based.

### Site Setup

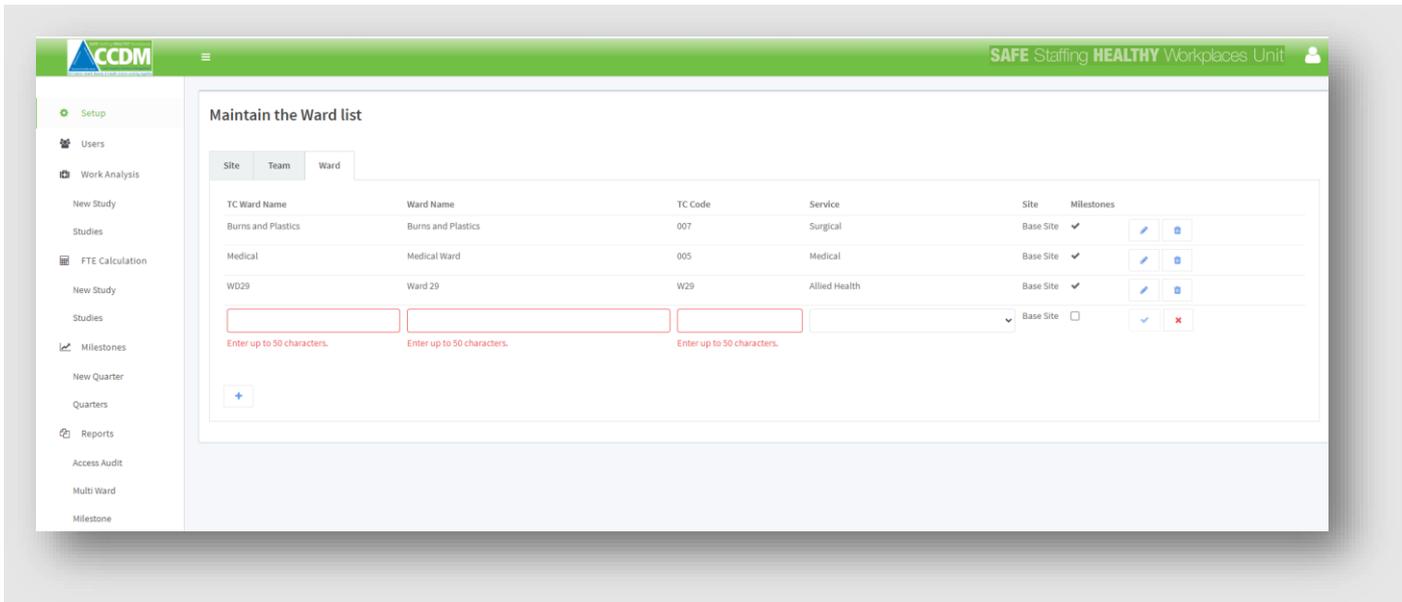
To setup a DHB site, click on **Setup** from the main menu on the far left. Next, click on the **+** icon at the bottom of the 'Site' tab. Enter information in each of the boxes that appear outlined in red. If the site is to be included in the CCDM quarterly milestone reporting, select the small milestones box to have a tick within it.



Now click on the tick icon  to the right of the tab to save your entry.

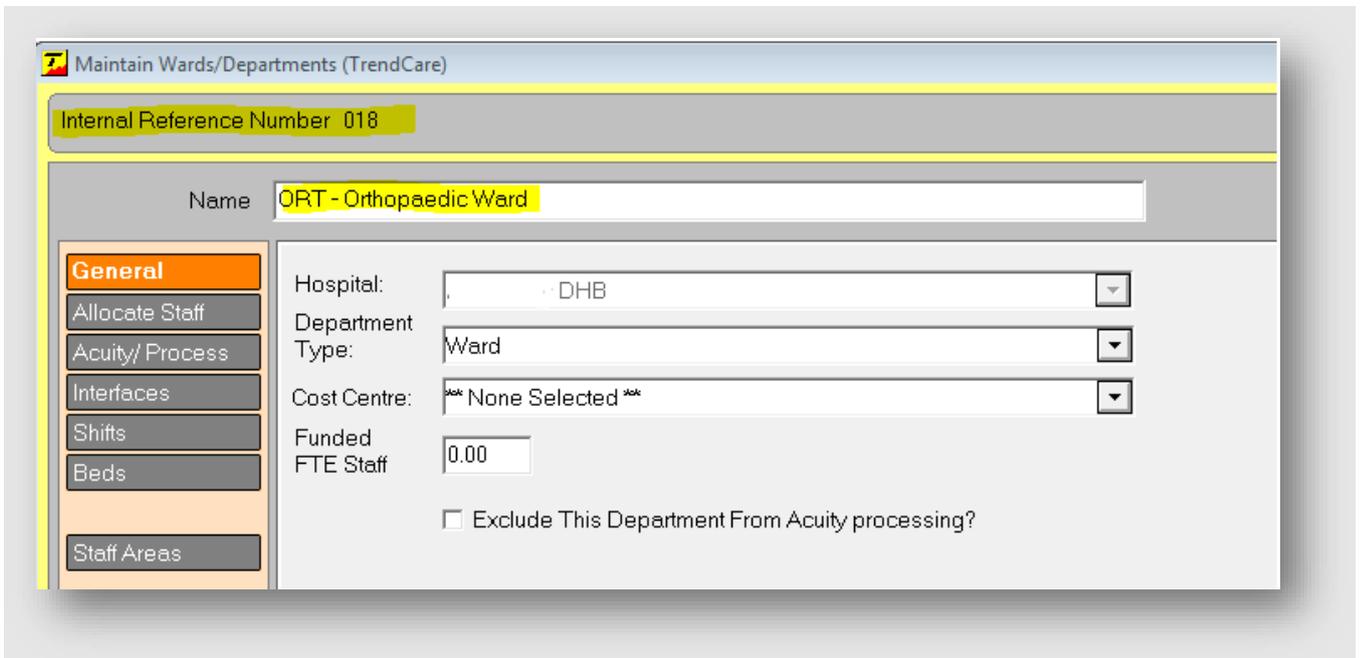
### Ward Setup

To setup a ward/unit within the software, click on **Setup** from the main menu on the far left. Next, click on the **+** icon at the bottom of the 'Ward' tab. Enter information in each of the boxes that appear outlined in red. If you have a long list of wards/units you will need to scroll to the bottom of the tab to see the data entry fields.



Enter the TrendCare or TC Ward Name (short name), Ward Name (DHB name) ideally, this should be no longer than six characters, and the TC Code for this ward. The TrendCare Ward Name, Ward Name and TrendCare Code cannot be identical to any other ward within the software, these fields act as unique identifiers for a ward within the software, and the system will not allow them to be doubled-up.

The TC Code is a three-character code. The TC ward and code are visible in the Maintain>Ward/Departments screen. The short ward name is 'ORT' in the screenshot below, and the code (called 'Internal Reference Number') is '018'. In this example, 'ORT' would be entered in the software data field for TC Ward Name, and '018' would be entered in the TC Code data field.



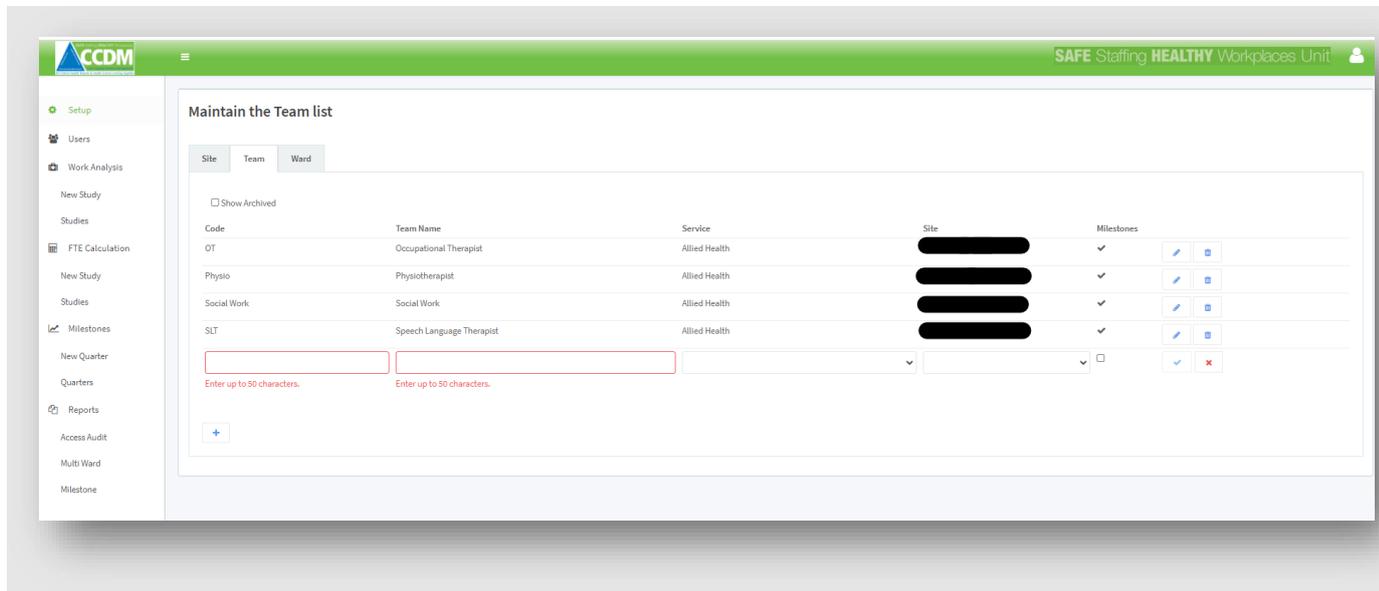
If you have a ward with a numeric code that is not 3-digits, you will need to enter leading zeroes. So for example, '2' becomes '002' and '64' becomes '064'.

Finally, select the service type for this ward by clicking on the down-arrow at the right-hand end of that box and clicking on the appropriate service from the drop-down list and tick the small milestone box if this ward is to be included CCDM quarterly milestone report.

Now click on the tick icon  to the right of the tab to save your entry.

## Team Setup

To setup a Team within the software, click on **Setup** from the main menu on the far left. Next, click on the **+** icon at the bottom of the 'Team' tab. Enter information in each of the boxes that appear outlined in red. If you have a long list of Teams, you will need to scroll to the bottom of the tab to see the data entry fields.



Team code and Names act as unique identifiers within the software. For example, 'OT' can only be used once, and OT's on other sites or within the same site will not be able to use this name once allocated.

As per wards, each team needs to identify which service they belong to; typically, this is Allied Health, the site they are based at, and if they should be included in the milestones reporting.

Once entered, click on the tick icon  to the right of the tab to save your entry.

## Step 3 – User setup

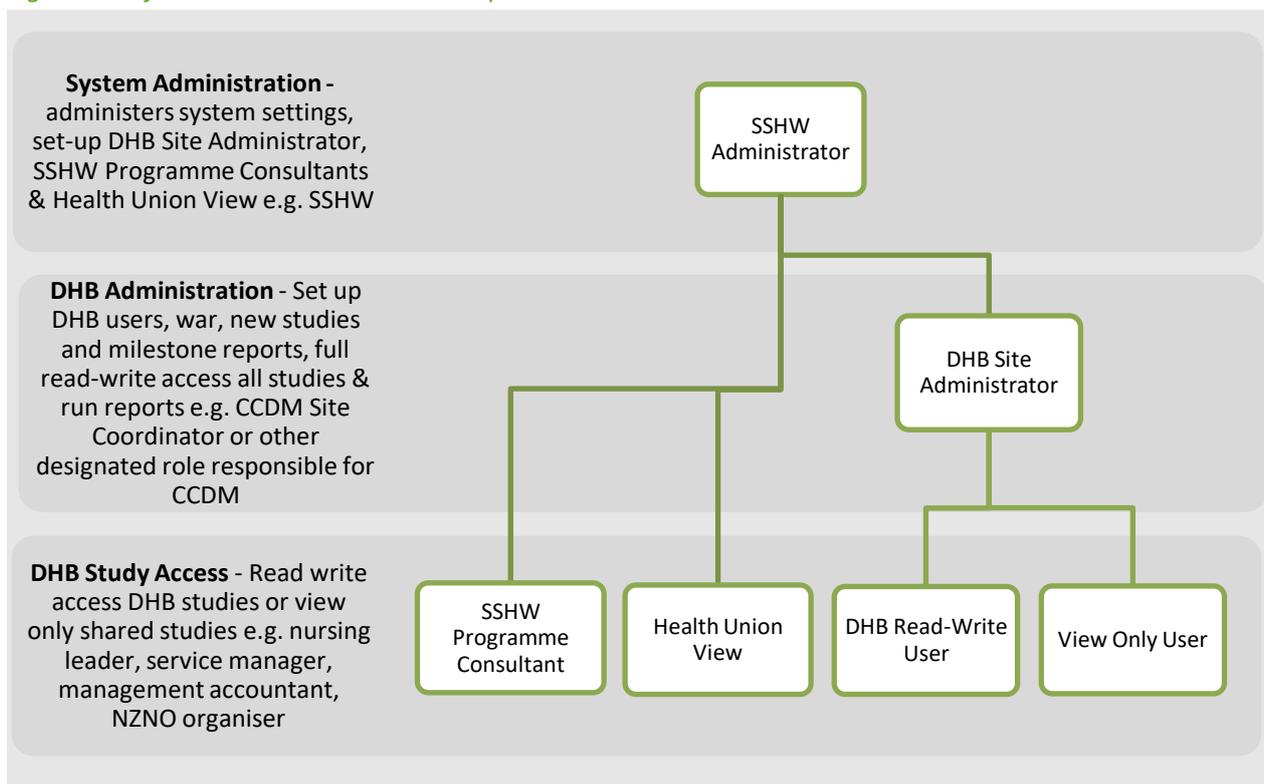
Step 3, software users' setup, can only be carried out by a DHB Site Administrator or the SSHW Administrator. Other users will not be able to see **Users** in the main menu. The User Tab is used to create new users, change user permissions, or delete users from the software (for example, when they have left the organisation).

The DHB Site Administrator can choose from three user types (see Figure 1):

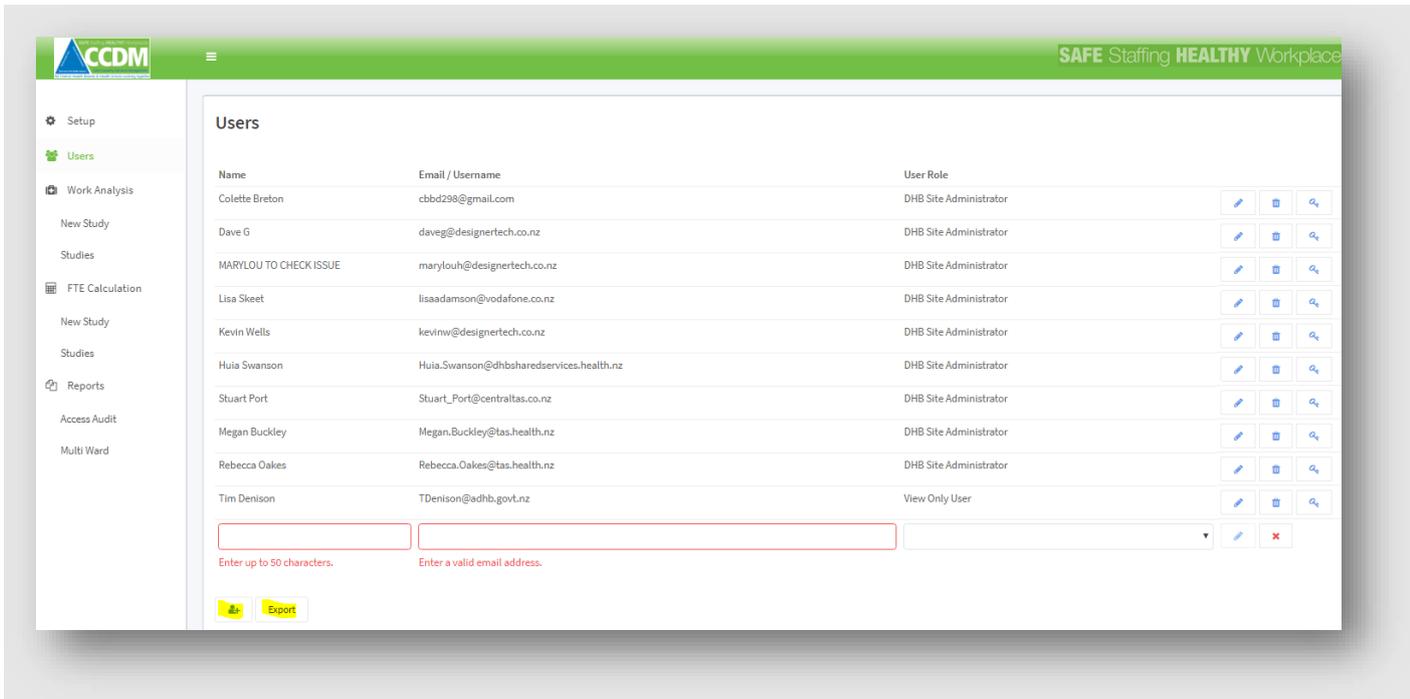
1. DHB Site Administrator,
2. DHB Read-Write User and
3. View Only User.

The Health Union View and SSHW Programme Consultant can only be set up by the SSHW Administrator. The CCDM Council should agree on the users and the access permissions.

*Figure 1: Software user roles and access permissions*



From the main menu on the far-left side of the screen, click on **Users**. Using the icon  at the bottom of the User Tab, add any users you would like to have access to the software. Fill in the data entry fields highlighted with name, email address and then select the type of User from the drop-down list.



When you have finished entering the user details, make sure you click on the pencil  icon to save your entry (or to make changes). The message 'Creating User Please Wait' will appear. After a few seconds, a second message will display advising that an activation email has been issued for that User (or that their access permissions have been updated, where that User already exists but had another role).

The trash can icon  can be used to delete the User and the key icon  used for some additional options, i.e. reset (to reset a password), resend (to re-send the activation email in the event it does not work or has timed out). The cross **X** in this tab is used to close the additional options.

### User tip 2 – Exporting the user list for printing

At the bottom of the tab next to the add user  icon there is an Export button (see screen shot above). Click on the Export button. The document download will appear at the bottom far left of your desktop screen. It can be viewed and or saved by clicking on the download.

The DHB Site Administrator and SSHW Administrator can export the user list to csv. This is so the list can be easily printed, reviewed and amended as agreed by the CCDM Council. It is recommended that the user list is reviewed at least annually, so that access to the software is maintained for current users only.

## Step 4 – New study setup

Step 4 is setting up a new study. This can only be carried out by a DHB Site Administrator. This is because other users will not be able to see **New Study** in the main menu.

To create a new study, click on the **New Study** under FTE calculation from the main menu on the screen's far left. This will bring up the Setup Tab for New FTE Study. You will see red boxes highlighting three data entry fields. Once the first three data fields have been entered, the software will generate a unique Study ID. Once this has been generated, other users will be able to 'see' this study under FTE Calculations>Studies or My Studies.

Enter the following data:

1. Ward – selected from the drop-down list of wards already loaded on the Setup from the main menu. (If the ward has not already been set up in the software, you will need to go to Setup from the main menu (see Step 2).
2. Study Time Period – start and finish dates. If the period is more or less than an entire 12 month period, a warning will appear. If the period is less than a year, the 'Base' and 'Total FTE' tabs will not display. If studies for less than 12 months are completed and an annualised version (where the software calculate the annual need), please discuss this with your Program Consultant.

### User tip 3 – Changing the screen resolution to improve the display

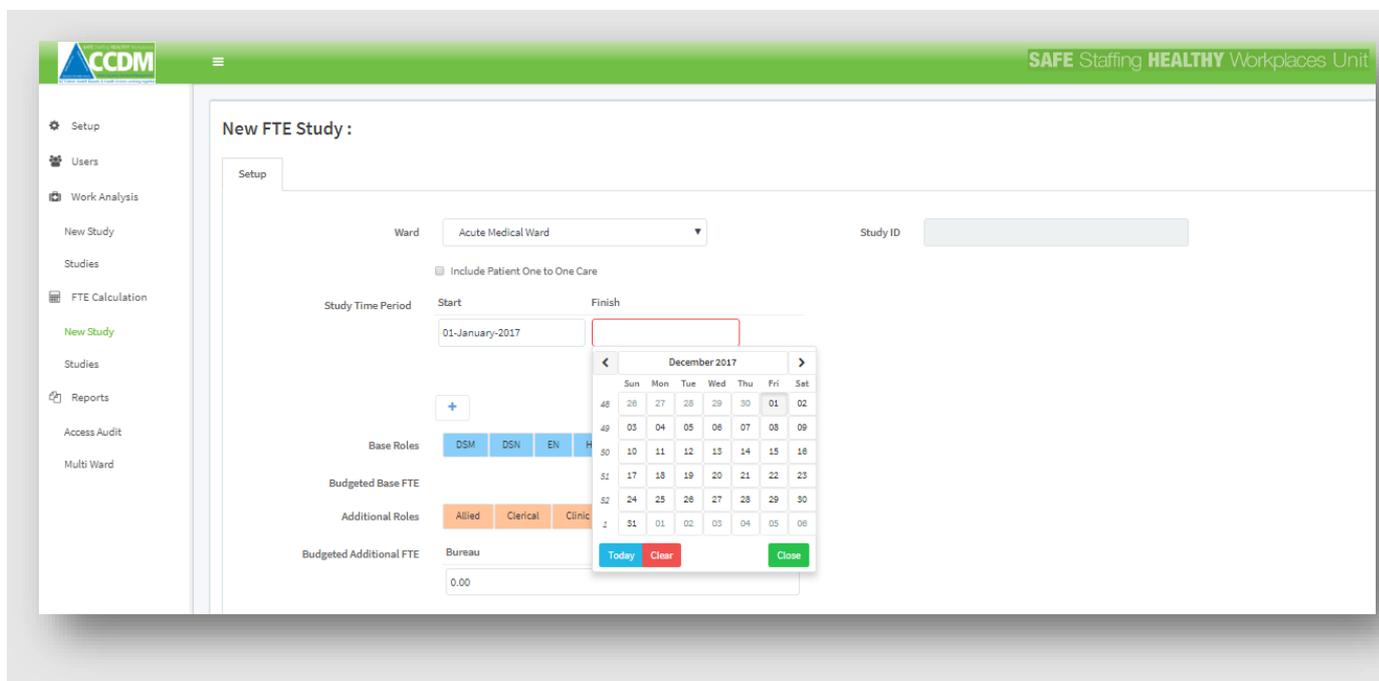
Different screen resolutions (and screen sizes) can affect the display of data. At higher resolutions, items appear sharper. They also appear smaller, so more items can fit on the screen. The screen resolution can be increased or decreased.

- To decrease the resolution, press the [Ctrl] + [-] key simultaneously.
- To increase the resolution, press the [Ctrl] + [Shift] + [+] keys simultaneously.

Try this when you cannot see the arrows in the data fields (where they would normally appear) or you may have entered some data into a field, but it is not visible.

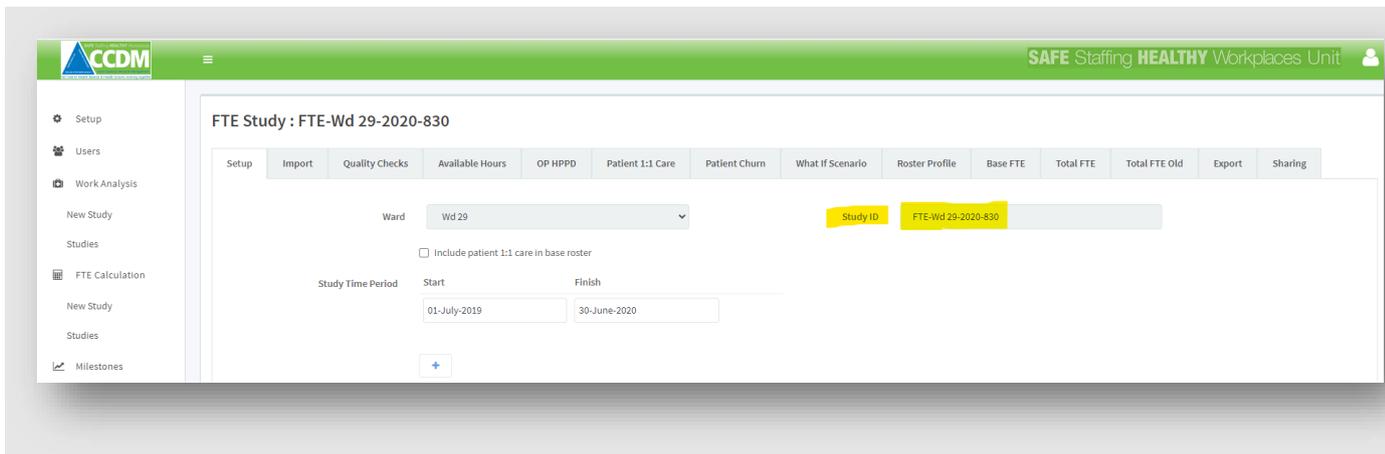
### Study period

The date must be selected from the calendar that pops up when you place the cursor in the date start/finish fields. Use the arrow keys at the top of the calendar to scroll through the months and years. You can also select 'clear' and 'today' using the keys at the bottom of the calendar.



The study period should be 12 months in order to calculate an annualised FTE for budgeting purposes. If the study is not for 12 months, an alert will appear. The software also allows for comparing two or more periods, e.g. over two winters, or establishing winter roster patterns versus summer roster patterns. However, the software will not calculate an FTE using periods of less than 12 months unless the SSHW unit has approved this. Please discuss this with your CCDM Programme Consultant.

Once the study date period has been entered, click on the **Save** button at the bottom of the tab. A pop-up message  will automatically appear at the top of the screen when you have successfully saved the information. Once you have saved the study, the software generates a unique study ID.



Continue entering data into each of the required fields on the Setup tab or advise the DHB Read-Write User or SSHW Programme Consultant that the study is now ready for data entry.

#### User tip 4 – Navigating the study tabs

In the screen shot above you can see the Setup tab is one of 14 tabs in total. These 14 tabs will not be visible until the unique Study ID has been generated. Study Set-up can only be done by the DHB Site Administrator. Once the Study ID has been assigned the software allows you to refer to the study later or to return to the Set-up tab if you are interrupted part way through. It is recommended that the tabs are completed in the order they appear.

#### Include patient 1:1 care in the base roster

Patient 1:1 care is recorded in TrendCare (Ward Patient One on One Care Report) as part or full shifts. The check box for 'include patient 1:1 care in base roster' can be ticked or left unchecked in the software. When the 'include patient 1:1 care in base roster' box is ticked, this indicates the decision has been made to include all 1:1 care hours (part and full) in total care hours on which the recommended roster is based. If left unchecked, the decision has been made to exclude 1:1 care hours of 8 or more from the total care hours on which the recommended roster is based.

The decision to include or exclude 1:1 care hours is based on whether you want to provide for patient 1:1 care in the base roster or budget for this from the bureau. This depends on

1. Service type. For example, an Intensive Care Unit (ICU) where patient 1:1 care is core business. Therefore 1:1 care should have the 'Include patient one to one care' box ticked.
2. Frequency or amount of patient 1:1 care, e.g. every day, every shift
3. The decision to routinely provide patient 1:1 care, for example, following a specific surgical procedure.

**User tip 5 – Making sure 1:1 care hours are included/excluded**

The 'include patient 1:1 care in base roster' check box is simply a marker. The check box tells the software what messaging appears on the Import tab and to display 1:1 care hours excluded from the base separately as bureau FTE on the Total FTE tab.

To ensure that 1:1 care hours of 8 hours or more are excluded from the base roster the Patient One on One Care report must be imported. This provides the necessary information for the software to subtract these hours from the total care hours on the What If Scenario charts. Refer to Step 7 – Importing reports.

Where 1:1 care hours are high or routinely planned, e.g. postoperative care or patient watches, further analysis of the TrendCare report is warranted. The patient 1:1 care of 8 hours or more is automatically charted by the software on the Patient 1:1 Care tab for each day and shift (see Step 9). If the patient 1:1 care pattern is regular, two separate FTE calculations can be loaded for the same date period; one with 1:1 care included in the base and one with 1:1 care excluded from the base.

When doing this analysis, in addition to removing the Patient 1:1 csv, the roster re-engineering report should be exchanged. The import should be filtered to exclude or include patient 1:1 care consistent with your selection on the Setup tab, i.e. if you exclude 1:1 care from the base roster, then exclude 1:1 care in the roster re-engineering report, and vice versa.

For example, a medical ward may have several patient watches. To determine how much of the FTE is required for this type of 1:1 care, you run the FTE calculation twice and compare the results. Then decide whether to:

1. Include the 1:1 care hours in the base roster, e.g. 1:1 care occurring every shift every day.
2. Include part of the 1:1 care hours in the base roster and reserve some FTE for the bureau, e.g. 1:1 care occurring primarily on night duty, so base FTE on nights increased only, remaining FTE required allocated to bureau budget.
3. Budget for the bureau to cover all of the 1:1 care requirements, e.g. 1:1 care requirements are irregularly irregular, so the total FTE required for 1:1 care is allocated to the bureau budget.

**Base roles**

Select all the roles that you want to include in your base roster only. The base roster is defined as those hours required to provide direct and indirect patient care, seven days per week, all three shifts (AM, PM, N). This includes:

1. RN/RM
2. EN
3. HCA
4. Designated senior nurses (DSN) or midwives (DSM), if they are allocated 'clinical in department' hours or 'shift coordination' in TrendCare, should also be selected here. E.g.
  - Associate Clinical Nurse Manager (ACNM) or midwife (ACMM)
  - Clinical Nurse Coordinator (CNC) or midwife (CMC).

This does not include the CNM/CMM as they are accounted for in the Software under Additional Roles.

The screenshot displays the 'FTE Study : FTE-Wd 29-2020-830' configuration page. The interface is organized into a header, a left-hand navigation menu, and a main content area. The main area contains several sections: 'Ward' (Wd 29), 'Study ID' (FTE-Wd 29-2020-830), 'Study Time Period' (Start: 01-July-2019, Finish: 30-June-2020), 'Base Roles' (DSM, DSN, EN, HCA, RM, RN), and 'Budgeted Base FTE' (DSN: 0.80, HCA: 5.00, RN: 24.18). The 'Budgeted Base FTE' section shows a total of 24.18 FTE units.

### Budgeted base FTE

This is the current budgeted FTE for the base roster, planned and may include unplanned leave depending on your choice of Total FTE tab ('Total FTE' or 'Total FTE old') with which you review your study results.

**To ensure the correct Total FTE / Total FTE OLD tab is used, remember:**

- set-up tab **excludes** unplanned leave = use Total FTE tab
- set-up tab **includes** unplanned leave = use Total FTE OLD tab

Include all roles that provide direct and indirect patient care 24/7, including clinical, shift coordination, housekeeping, etc. This includes:

1. RN/RM
2. EN
3. HCAs
4. ACNM/ACMM or CNC/CMC if they are allocated 'clinical in department hours' and/or 'shift coordination'. Use the DSN or DSM button for these designated senior nurses/midwives.

The Budgeted Base FTE excludes roles that do not routinely have patient assignments, e.g. CNM/CMM, educator and ACNM/ACMM (if the ACNM/ACMM has allocated time for administration, this may be some or all their FTE). The Budgeted Base FTE also excludes other roles labelled 'supernumerary', for example, clinic nurse/midwife or Clinical Nurse/Midwife Specialist (CNS/CMS).

#### User tip 6 – Tabbing between data fields

You can navigate between the data entry fields by using the tab key. To do this, put your cursor in the first data entry field, type in the number you want then hit the tab key to get to the next field. This speeds up the data entry process. Using the tab key is particularly useful when entering the budgeted FTE, roster and available staffing hours.

### *Additional roles*

Additional roles are those roles that do not routinely take a patient assignment and are often called 'supernumerary'. People in these roles may provide direct or indirect patient care and ward/unit related activities, usually during business hours. This includes:

1. CNM/CM
2. Nurse or Midwife Educator
3. CNS/CMS
4. Clinic nurse/midwife
5. ACNM/ACMM or CNC/CMC that have one day per fortnight clinical administration or clinical administration support.
6. Clerical (ward clerk) – if they are budgeted for from the ward/units cost centre.
7. Allied health – if they are budgeted for from the ward/units cost centre.
8. HCA's who do not contribute to patients clinical care
9. In some circumstances, staff who provide eight hours or more of coordination may be entered, discuss with your programme consultant.

Use the DSN or DSM button for all designated senior roles other than the CNM/CMM. If the CNM/CMM is not part of the ward budget, then do not select the CNM/CMM button. This would also apply, for example, to educators where the ward does not hold the budget. When not selected, the role will not appear in the subsequent data fields (for 'budgeted additional FTE' and 'rostered additional hours') or tabs.

### *Budgeted additional FTE*

This is the current budgeted FTE for supernumerary roles, including the FTE for planned and unplanned leave. Include roles that provide direct or indirect patient care and ward/unit related activities, Monday to Friday (usually during normal business hours). The available role types include:

1. Allied health – if they are budgeted for from the ward/units cost centre.
2. Clerical (ward clerk) – if they are budgeted for from the ward/units cost centre.
3. Clinic nurse/midwife
4. CNM/CMM
5. DSN/DSM
6. CNS/CMS
7. HCA non-clinical

Use DSN/DSM button for all designated senior roles, excluding CNM/CMM. This may be part FTE if the FTE is split between Budgeted Base FTE and Additional. For example, if the ACNM/ACMM works 0.9 FTE undertaking direct and indirect care and 0.1 FTE clinical administration support, 0.9FTE would be entered into the 'budgeted base FTE' under DSN and 0.1 FTE in the 'budgeted additional FTE' under DSN.

If any of these roles, e.g. CNM, CMM, or educator, are not included in the ward budget, then the FTE would be '0'.

### *Minimum base FTE*

Setting a Minimum Base FTE prevents the software from calculating a recommended roster lower than the minimum FTE. If needed, the User can override the calculated roster when reviewing the 'What If' Scenario charts. The minimum FTE should be set based on the:

- Minimum FTE required to provide core cares only
- Actual minimum hours needed on any given shift or day
- Industry standards for speciality areas, e.g. intensive care, mental health
- DHB policy/business rules

Selection of a Minimum Base FTE for the Software is a CCDM Council decision.

*Rostering the Rostered base and coordination hours*

Rostered base hours are the hours you have for your base roster, i.e. the total hours rostered to provide patient care (both direct and indirect) for each hour of each day of the week. If this is the second round of calculations or later, populate this using the roster created in the previous Study

Rostered shift coordination hours are the number of hours your organisation has agreed are appropriate for your ward/unit coordination for each shift and each day of the week. Shift coordination includes organising staffing for current or subsequent shifts and supervising staff. The hours required for shift coordination are usually documented in the TrendCare business rules (or equivalent). These 'planned' hours may differ from the actuals, as shift coordination hours can change depending on clinical need. It is the planned hours that are documented in the software.

Shift coordination hours are usually undertaken by the ACNM/ACMM, CNC/CMC, RN or RM and are apportioned in this order when transferred to the roster profile tab. If the CNM/CMM does some shift coordination, do not add their coordination hours as their FTE is supernumerary and captured under Additional Roles.

If a staff member provides both shift coordination and base hours during a shift, the hours need to be split between the Coordination line and the role line of the Rostered Hours roster.

Base		AM								PM							
	Role	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Mon	DSN	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	0
Mon	HCA	1	1	1	1	2	2	2	2	2	2	2	2	1	1	1	1
Mon	RN	6	6	6	6	6	6	6	6	4	4	5	5	5	5	5	5
Mon	Coord.	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0
Tue	DSN	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0
Tue	HCA	1	1	1	1	2	2	2	2	2	2	2	2	1	1	1	1
Tue	RN	6	6	6	6	6	6	6	6	4	4	5	5	5	5	5	5
Tue	Coord.	1	1	1	1	0	0	0	0	1	1	0	0	0	0	0	0

In this example, on Monday morning, the DSN four hours of coordination allocated (7-10) and 4 hours of clinical in department time (11-14:00) to make up the 8-hour shift. An alternative would be adding 0.5 to each hour for both the DSN and coordination line.

It is vital to capture the coordination time as this is additional to the clinical hours required when calculating the hours required within the 'What if Scenario' tab.

The same principle applies to the ACNM/ACMM or CNC/CMC if they split their hours between clinical in department and shift coordination. Use the DSN/DSM line to record their clinical in department hours in the Rostered Hours roster. If the role type line is not available/visible, go back to the Base Roles and ensure you have selected that role type.

It may be appropriate to capture coordination hours within the additional roles section; this would only occur if the shift is solely shift coordination. Please discuss this further with your programme consultant for more detail.

Rostered Hours roster excludes your additional 'supernumerary' roles, e.g. CNM, CMM, educator, specialist and clerical roles, as these are included in the Additional roles Roster.

### User tip 7 – Populating the Rostered hours efficiently

The software has the functionality to copy an entire day's roster to the following day by selecting the copy down symbol . Populate roles with consist, or reoccurring shift and copy these down the entire week. Often Monday to Fridays have minimal changes to the roster and making small adjustments to roles that change is much faster than populating each day individually

Below the roster is a summary of the Base roles FTE based on the actual roster entered, rather than the budgeted FTE. This excludes the coordination FTE component but allows the User to identify any significant data entry error resulting in an inflated FTE and should be used as a 'sense check'. Note that the totals will be less than the Budgeted FTE enter higher up on the setup tab as the coordination FTE is currently excluded.

	Sun	DSN	0	0	0	0	0	0	0	0	0
	Sun	HCA	1	1	1	1	2	2	2	2	2
	Sun	RN	5	5	5	5	6	6	6	4	4
	Sun	Coord.	1	1	1	1	0	0	0	1	1
Base Roles Rostered FTE									DSN	HCA	RN
									0.8	4.2	20.28

### Rostered additional hours

Rostered additional hours are the hours usually worked by the CNM/CMM, clerical staff, educator, clinic nurse, or CNS/CMS. These hours would usually be Monday to Friday. This is where the ACNM/ACMM or CNC/CMC clinical administration or clinical administration support hours would be entered. Complete the roster in exactly the same way as the base roster is populated. Again, the additional roles rostered FTE is displayed below the roster as a sense check

## Comments and Approval

A comments box is now available for short additional observations / contextual comments. This box is limited to 250 characters.

The final task to complete on this tab is to document who is approving the tab's content as accurate. Typically, this will be a management accountant or financial manager, although this does not have to be the case. Finance confirmation of the accuracy is preferable as any variance to FTE required is made against this base budget FTE. Once approved, no further changes can be made to the tab without unapproving the page. A date stamp records each confirmation.

The screenshot displays the software interface for FTE calculation. At the top, there are two rows of data entry fields for 'Sun' with columns for 'CNM/CMM' and 'DSN/M', each containing 16 input boxes with the value '0'. Below this is a summary table:

Additional Roles Rostered FTE	Clerical	CNM/CMM	DSN/M
2.05	1	0	

Below the table is a 'Comment' field containing the text: "Clerical cover at the weekend can flex if required. Clinical educator business case pending. SO DSN currently has no budget. Proposed budget 0.6 FTE." Below the comment is an 'Approved By' field with an empty input box. At the bottom, there is an 'Approvals' list:

Approvals	
Colette Breton	2020-12-10 11:04
Andy Brown, Finance Manager	2020-12-01 12:51
Jean Smith, Management accountant	2020-11-16 10:22
Jean Smith, Management accountant	2020-11-15 13:28

A blue 'Save' button is located at the bottom left of the interface.

### User tip 8 – Avoiding typos

The software has some alert messages such as 'enter a number greater than 0'. However, the software will not stop you making a data entry error. For example, entering 40 hours instead of 4 hours shift coordination. It is important that the software entries are double checked (preferably by a second person) for transcribing errors. If you have made a typo it will usually become evident later in the process when viewing the What if Scenario graphs or total FTE requirements. The FTE Calculation Checklist will help you identify typos early on and ensures a good quality assurance process is followed.

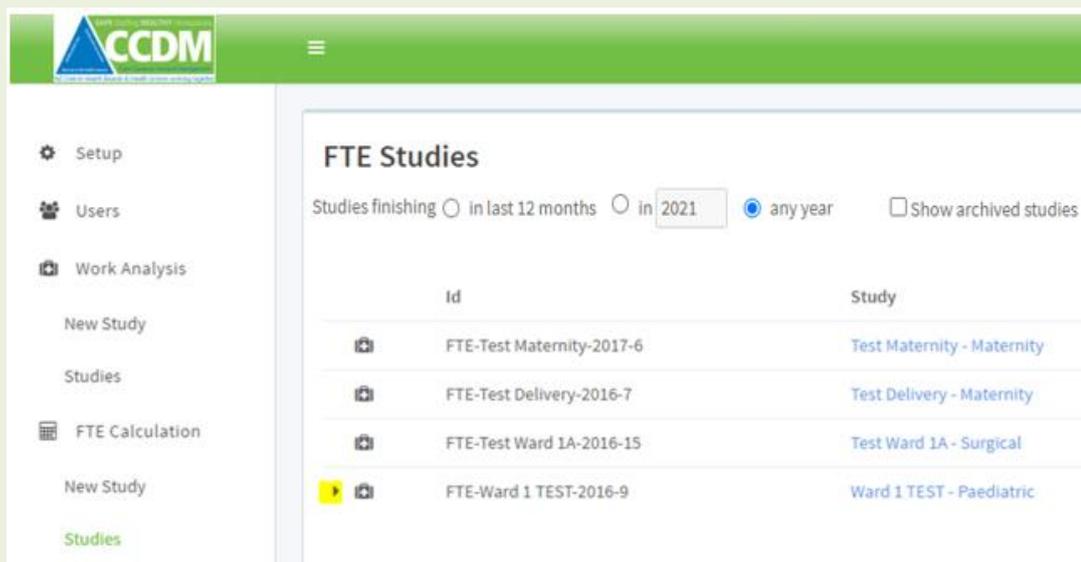
When you reach the bottom of the tab, click the **Save** button, this will apply the tab's change to the rest of the study. A pop-up message will automatically appear at the top of the screen when you have successfully saved the information. The next time you want to work on the study, you will find it under the FTE calculation > **Studies** on the main menu at the far left of the screen.

### User tip 9 – Finding an existing study

To find an existing study click on FTE calculation\studies from the main menu. All studies are named in the same way i.e. study type, ward name, year of completion and unique identifier (UID). So, for example in the screen shot below the first study listed is 'FTE-Test Maternity-2017-6'. This means it is an FTE calculation for a ward named 'Test Maternity', completed in 2017, UID 6.

The Studies list will display with five sorting functions:

1. A check box for 'last 12 months' – default option, this box shows all FTE studies loaded for that DHB
2. A check box for 'any year' – checking the box will remove all studies more than 12-month-old
3. Select year of the study – entering a year will remove all studies that did not end that year
4. A search option that allows you to type study numbers or ward names to filter the studies onscreen
5. An arrow next to wards where there are multiple studies – clicking on the arrow expands the list and shows all studies listed for that ward (this can be used in conjunction with the other search functions).



Studies with the same date are sorted by study number from lowest to highest. So, for example 'FTE-Ward 1 TEST-2016-9' in the screen shot above is one of 6 studies numbered 9 through to 14. Study 9 is displayed while the others are 'hidden' from view until the arrow is used to expand the list.

## Step 5 – Importing reports

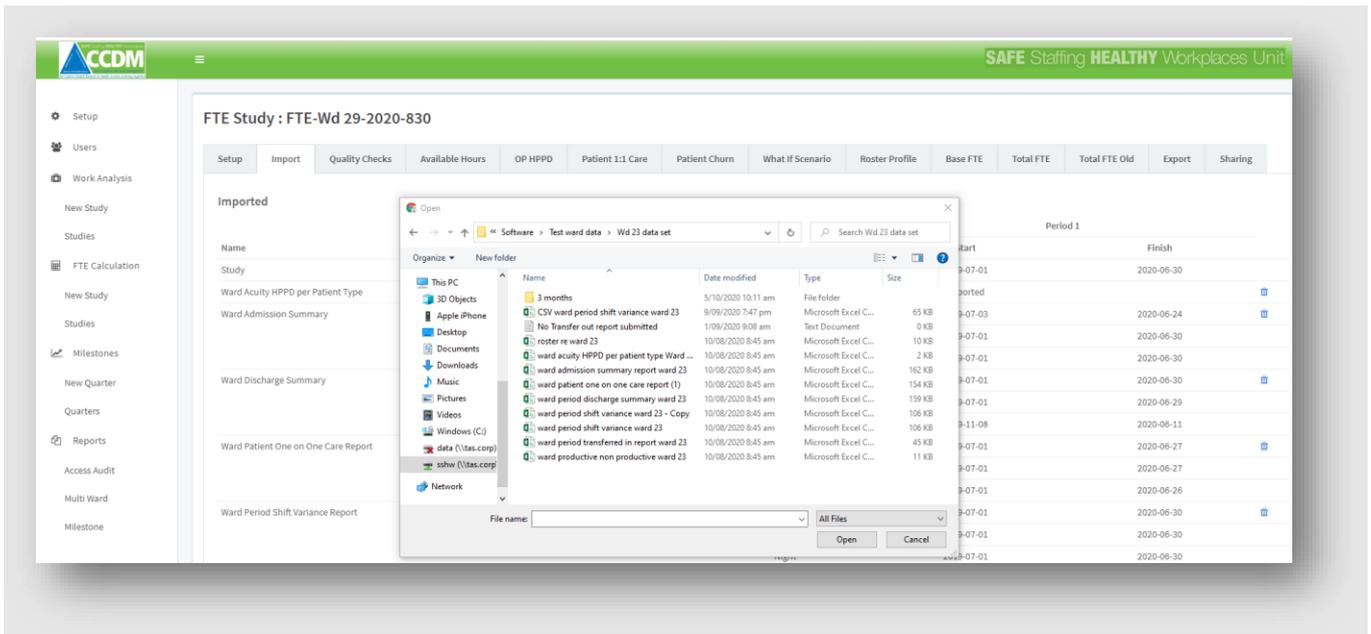
Step 5 involves importing reports from TrendCare. This can be done by the DHB Site Administrator, DHB Read-Write User and SSHW Programme Consultant once the required TrendCare csv files are saved to the computer. There are nine reports that can be imported from TrendCare:

Report Name	TrendCare File Path
1. Ward Period Shift Variance	Reports\Efficiency\Ward Period Shift Variance (select date range)
2. Ward Patient One on One Care Report	Reports\Clinical\Ward Patient One on One Care (select date range)
3. Ward Roster Reengineering Report	Reports\Efficiency\Ward roster re-engineering report (select date range), plus include/exclude 1:1 care
4. Ward Productive and Non-Productive Hours Report	Reports\Efficiency\Ward Prod. and Non Prod. Hours (select date range <b>and</b> filter out clerical staff)
5. Ward Acuity HPPD Per Patient Type	Reports\Efficiency\Ward Acuity HPPD Per Patient Type (select date range)
6. Ward Discharge Summary	Reports\Bed Mgmt\ Ward Discharge Summary (select date range)
7. Ward Admission Summary	Reports\Bed Mgmt\ Ward Admission Summary (select date range)
8. Ward Period Transferred Out	Reports\Bed Mgmt\Ward Period Transferred Out (select date range)
9. Ward Period Transferred In	Reports\Bed Mgmt\Ward Period Transferred In (select date range)

Of these nine, reports 1,3 and 9 are critical to complete an FTE study; report 2 is critical if you plan to exclude 1:1 care. The remaining reports enhance quality checks and populate the Churn tab.

Navigate to the report you need in TrendCare. Select 12 months of data (or the date period you want), then save to csv. For the roster re-engineering report, filter to exclude or include patient 1:1 care consistent with your selection on the Setup tab, i.e. if you are excluding 1:1 care from the base roster, then exclude 1:1 care in the roster re-engineering report. Save the TrendCare csv file in your computer folder. **Do not** open the csv file using Excel as this disrupts the comma separating value needed for the software to load the data.

On the import tab in the software, click on **Import File** (see screenshot below); this will bring up Windows Explorer. Navigate to the folder where you have saved the TrendCare csv file, click on the file, then open. A message will appear at the bottom of the list of reports stating the import was successful 'no errors'. It is essential to wait for a file to import and appear on the screen or an error message before importing further imports.



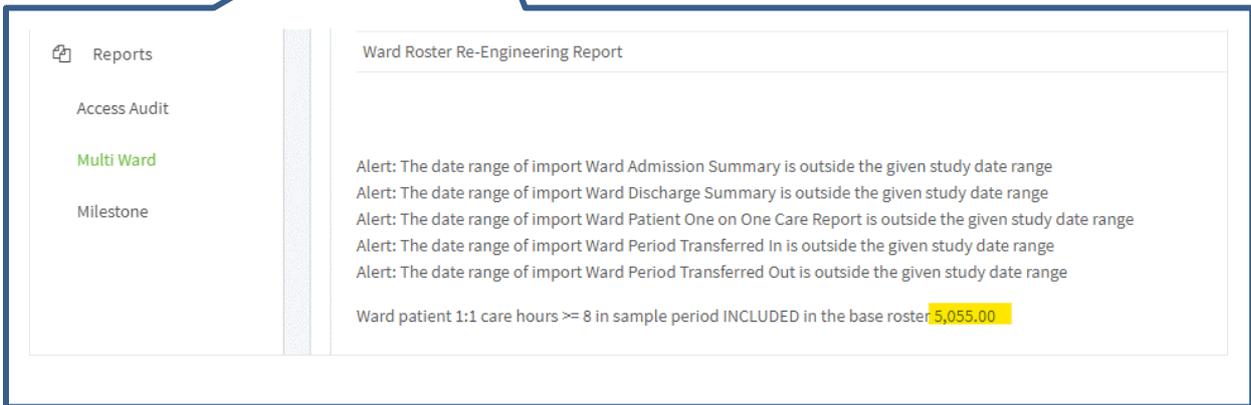
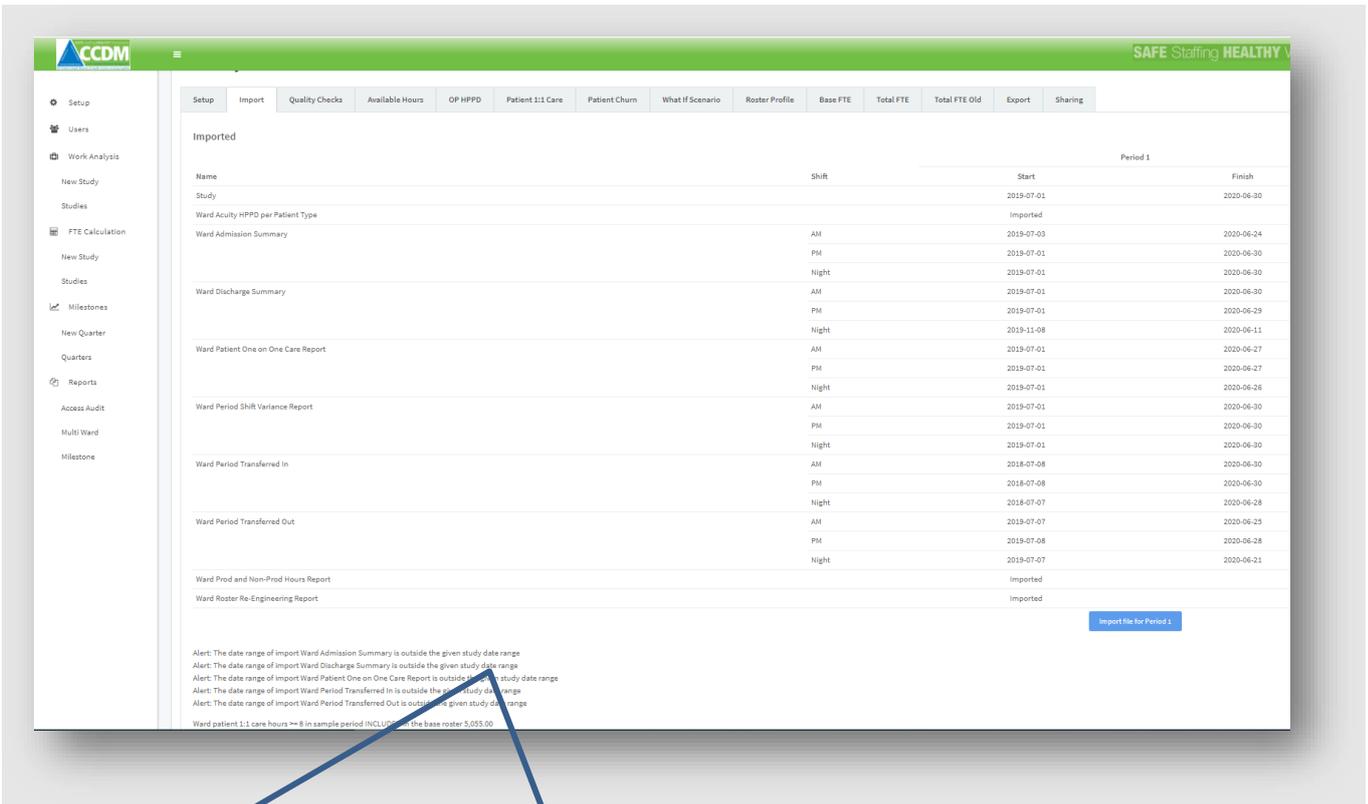
### User tip 10 – Roster re-engineering report and 1:1 care

If the 'Include patient 1:1 care' check box is ticked on the Setup Tab, then the Roster Re-engineering Report will need to include one on one care. Conversely if the 'Include patient one on one care' check box is not ticked then the Roster Re-engineering Report will need to exclude one on one care. It is important that the two match, otherwise the software may calculate a recommended roster that looks higher than needed. This is because the software uses the roster re-engineering report to generate the calculated roster.

If there are errors, a system-generated error message will appear. The most common errors relate to the loss of csv file integrity (often because the csv file was opened using Excel) and incorrect TC code or dates that do not match those entered in the study Setup. Check all of the above, correct where needed and re-try importing the file.

Alerts are designed to alert the User to data sets that may be incorrect, typically due to the import's date ranges not exactly matching the study period. This may be due to events not happening on the first or last day of the study period (such as no one was admitted that day), or the imported report has the incorrect date range. Alerts should not stop a study from progressing but should prompt a double-check of the imports date ranges.

The sum of the total 1:1 care hours (of 8 hours or more) is displayed on the Import tab. These hours are displayed as either 'INCLUDED in base roster' or 'EXCLUDED from base roster' depending on whether the check box is ticked on the Setup tab or not. In the screenshot example below, a total of 5,055 hours is EXCLUDED from the base roster.



**User tip 11 – Benefits of importing the patient 1:1 care report**

Importing the Ward Patient One on One Report is optional if the study is to include patient 1:1 care in the base roster e.g. for ICU. In this instance the system does not need the Ward Patient One on One Report because no hours need to be removed and the FTE for 1:1 care of 8 hours or more is not calculated separately.

However, it can be useful to import this report so that the total hours of patient 1:1 care of 8 hours or more are displayed on the Import Tab and on the Multi Ward Report (see Step 16 – Reports). The Patient One on One Report also populates the charts on the Patient 1:1 Care tab. On this tab the 1:1 care of 8 hours or more are automatically charted by the software for each day and each shift. The charts provide additional information and transparency on the frequency and intensity of 1:1 care, this can support roster decision making. No patient data is held or displayed by the software.

# Step 6 – TrendCare quality checks

Step 6 is the TrendCare quality checks tab. This tab can be completed by the DHB Site Administrator, Read-Write User and/or SSHW Programme Consultant. The quality checks assess the accuracy and integrity of the TrendCare data. There are two parts to the Quality Check tab.

1. Key performance indicators for TrendCare use

**FTE Study : FTE-Wd 29-2020-830**

Quality Checks

Group	KPI	Value	Check	Comment
IRR testing	100% of staff have undergone IRR testing in last 12 months	100.0%	Green	x1 new staff member excluded
IRR testing	Minimum 60 acuity variables tested for each staff member	95.0%	Yellow	Night staff can find it difficult to attain sufficient variables
IRR testing	> =90% accuracy for each staff member	100.0%	Green	
Categorisation	100% categorisation	99.0%	Yellow	9 pt's not categorised. FTE working group ok with this amount
Categorisation	100% of patient type hours are within benchmark	99.0%	Green	
Actualisation	100% actualisation	97.0%	Yellow	13 pt's not actualised. FTE working group agree this is acceptable
Allocate Staff screen	100% accuracy of worked roster	100.0%	Green	
Allocate Staff screen	100% accuracy of split of hours	95.0%	Green	

2. The average HPPD by patient type – This is populated by importing the 'Ward Acuity HPPD Per Patient Type' report from TrendCare

Variance to patient type benchmarking (hours and %)

Patient Type	% of pt days	HPPD	Lower benchmark	Upper benchmark	Variance to benchmark	Variance in hours	% of hours outside benchmark	Comment
SUR	67.99%	4.81	3.70	4.80	0.01	112.65	0.22%	Minimal variance, review when new benchmark values are available
MED	5.17%	5.04	3.00	4.90	0.14	77.20	0.19%	Outliers from medical ward
COL	9.19%	4.80	4.20	5.80	0.00	0.00		
HDS	3.20%	6.07	5.50	9.00	0.00	0.00		
ORT	6.40%	5.19	4.20	4.80	0.39	273.45	0.53%	Clin will ensure additional focus on the TC data for orthopaedic patients
VAS	2.20%	5.51	4.30	5.30	0.21	50.84	0.10%	
SOI	1.54%	4.86	4.50	5.30	0.00	0.00		
Total variance in hours				515.5				
Total hours				51,791.9				
Total variance as percentage of total hours				1.0%				

### Key performance indicators for TrendCare use

The top of the Quality Checks tab has eight key performance indicators (KPIs) based on the TrendCare gold standards. These are:

KPI	Criteria
1. IRR testing	All staff have undergone IRR testing in the last 12 months (target 100%)
2. IRR testing	100% of staff were tested with a minimum of 60 acuity variables
3. IRR testing	Accuracy met for each staff member (target $\geq$ 90%)
4. Categorisation	Categorisation (target 100%)
5. Categorisation	Percentage of hours within patient type benchmark (target 100%)
6. Actualisation	Actualisation (target 100%)
7. Allocate staff screen	Accuracy of the worked roster (target 100%)
8. Allocate staff screen	Accuracy of split of hours (target 100%)

Enter the quality checks as a percentage of compliance for each of the TrendCare KPIs. See the following pages for guidance notes on calculating the percentage. Where the KPI is less than the target of 100%, enter a qualifying statement in the adjacent comment box. For example, categorisation = 96%. The comment may read '188 patients not categorised approx. 821 hours are missing'.

#### User tip 12 – Saving the Quality Checks

The comment box can hold up to 96 characters. After this the characters will not be visible on the screen, save or export to PDF. All the indicators must have a value of '0' or more entered before this tab will save.

### Calculating the percentage for IRR testing

Inter-Rater Reliability (IRR) testing is the foundation of good TrendCare use. It provides assurance that at least once per year staff using TrendCare are being assessed as accurate. Poor compliance with IRR testing can impact on patient type benchmarking, actualisation/categorisation and the Allocate Staff Screen. TrendCare produces guidance and tools for IRR testing from which the percentage can be calculated.

### Calculating the percentage for categorisation/actualisation

Accurate categorisation and actualisation are essential to the quality and integrity of the data. Patient types outside of the benchmark can be estimated for their impact, but there is no way to adjust for this in the FTE calculation. Less than 100% categorisation/actualisation means missing patient care hours. There is no way to accurately calculate how many hours of care is missing, therefore no way to judge by how much the FTE may fall short of need.

The percentage compliance with categorisation and actualisation is obtained from the TrendCare Ward Actualisation Audit report. The report is found under Audits\Ward Actualisation, and the dates should be set to correspond to the same 12 months of the FTE study. As per the screenshot below, the patient categorisation rate (98.23%) and actualisation rate (98.09%) are in the Totals row at the end of the report. These figures are entered against KPIs for categorisation and actualisation on the Quality Checks tab.

<b>Ward Actualisation Audit</b>								Printed: 3/05/2017 10:29:13
29/03/2017 Wed	Day	25			100.00%			100.00%
	Eve.	26	1	3.85%	96.15%	1	3.85%	96.15%
	Ngt.	20			100.00%			100.00%
30/03/2017 Thu	Day	23			100.00%			100.00%
	Eve.	22	1	4.55%	95.45%	1	4.55%	95.45%
	Ngt.	21	2	9.52%	90.48%	2	9.52%	90.48%
31/03/2017 Fri	Day	23	1	4.35%	95.65%	1	4.35%	95.65%
	Eve.	20			100.00%			100.00%
	Ngt.	17			100.00%			100.00%
<b>Totals:</b>		<b>25758</b>	<b>457</b>	<b>1.77%</b>	<b>98.23%</b>	<b>491</b>	<b>1.91%</b>	<b>98.09%</b>
<b>Shift Summary</b>								
Day:		8832	183	2.07%	97.93%	188	2.13%	97.87%
Evening:		8715	196	2.25%	97.75%	209	2.40%	97.60%
Night:		8211	78	.95%	99.05%	94	1.14%	98.86%
<b>% of Shifts NOT Fully Categorised:</b>			<b>32.51%</b>					
<b>% of Shifts Fully Actualised:</b>			<b>67.49%</b>					

A patient categorisation rate of 98.09% may look good. However, this equates to 457 uncategorised patients. This missing data represents hours of care that are never captured, which cannot be accounted for in the FTE calculation.

### Calculating the percentage of patient type hours within benchmark

#### Why is this important

The correct utilisation of TrendCare to capture the actual clinical hours required is vital; it ensures we can be confident that the patient data will facilitate an accurate calculation when completing an FTE study. TrendCare calculates patient type benchmarks from international patient type data collections. Achieving consistency with a benchmark allows us to have confidence that a ward is correctly using TrendCare.

The 'patient type hours within benchmark' section is automatically populated by importing the 'Ward Acuity HPPD per Patient Type' report in step 5. The lower half of this tab is dedicated to displaying each patient type (of 1% or more patient days) and the most recent TrendCare benchmark for this patient type.

The software calculates the variance to benchmark for patient types (of 1% or more patient days):

- HPPD for the patient type
- Variance to benchmark in hours
- % of hours outside of benchmark for this patient type

Totals for all patient types are displayed at the bottom of the screen. Should a ward be under benchmark, this will be displayed as a negative number.

Variance to patient type benchmarking (hours and %)

Patient Type	% of pt days	HPPD	Lower benchmark	Upper benchmark	Variance to benchmark	Variance in hours	% of hours outside benchmark	Comment
SUR	67.99%	4.81	3.70	4.80	0.01	112.05	0.22%	Minimal variance, review when new benchmark values are available
MED	5.17%	5.04	3.80	4.90	0.14	77.20	0.15%	Outliers from medical ward
COL	9.16%	4.80	4.20	5.80	0.00	0.00		
HDS	3.20%	6.07	5.50	9.00	0.00	0.00		
ORT	6.40%	5.19	4.20	4.80	0.39	273.45	0.53%	CNM will ensure additional focus on the TC data for orthopaedic patients
VAS	2.20%	5.51	4.30	5.30	0.21	50.84	0.10%	
SGI	1.54%	4.86	4.50	5.30	0.00	0.00		
Total variance in hours					513.5			
Total hours					51,791.9			
Total variance as percentage of total hours					1.0%			

Save

In this example, a total of 513.5 hours are out of the benchmark from a total of 51,791.9 hours for the study period. This makes the total variance hours outside of the benchmark as a percentage of 1%. 99% of patient type hours are within the benchmark, and this figure should be added to the traffic light indicator.

Patient types that are higher than benchmark HPPD can have a substantial impact on the FTE calculation. For example, if one patient type is 0.71 HPPD higher than the benchmark and the patient bed days for that patient type is 3403, an additional 2416.13 hours (0.71 x 3403) is included in the total care hours required or 1.4 FTE (2416.13 hours divided by 1720 available hours/annum).

If there is concern that the patient type HPPD is above benchmark due to part 1:1 care, this can be checked. The following screenshot is an extract from the Ward Acuity HPPD per Patient Type Report. The proportion of part 1:1 care in the patient type HPPD is calculated as follows: patient type HPPD – (part 1:1 care / by the average patient days).

Patient Type	Average Patient Days with % of days	'Actual' Hours Required by Acuity	'Actual' HPPD Required by Acuity	1:1 Hours for Part of Shift Included in 'Actual'
MED Medical	9169.67 (96.7%)	40900:08	4.46	584:00
- 1:1 Care	128.33 (1.4%)	3409:00	26.56	
HDM Medical - High Dependency	84.00 (.9%)	394:00	4.69	29:00
- 1:1 Care	0.33 (.0%)	8:00	24.00	

So, from the report above, the patient type HPPD = 4.46. The part 1:1 hours included in the patient type HPPD = 584 hours / 9169.67 average patient days = 0.064 HPPD. The recalculated patient type HPPD = 4.396 (4.46 - 0.064).

The TrendCare benchmarks include part 1:1 care, so this calculation should not be used as a 'replacement' HPPD. Instead, this figure gives us confidence the high HPPD can be attributed to 1:1 care and not

excessive clinical inputs within TrendCare. This is why ongoing monitoring of the accuracy of TrendCare data is so important.

### *Calculating the percentages for the allocate staff screen, and quality check group*

The allocate staff screen impacts the accuracy of the other productive hours. For example, if nurses go off the ward multiple times per day (x-ray, recovery) for greater than 30 minutes, this must be recorded in the Allocate Staff Screen. If this is not recorded, the other productive hours will be lower, and the FTE requirement is underrepresented.

Daily checks of the allocate staff screen's accuracy by the CNM/CMM and TrendCare Coordinator should negate the need for a formal audit.

However, if daily checking is not occurring, a retrospective audit of the Allocate Staff Screen will be required to complete the quality checks.

The percentage compliance with the allocate staff screen is a two-step process:

1. Check the allocate staff screen against the worked roster.

Compare one month of the worked roster against the allocate staff screen every quarter. If 401 shifts of 420 that were worked in the month have the correct people listed on the allocate staff screen, then the percentage compliance is 95.48% ( $401/420 \times 100$ ). This is the figure to enter in the quality checks tab against the KPI 'Accuracy of worked roster (target 100%)'.

2. Check the staff split of hours on the allocate staff screen.

Check the split of hours for one month against the DHB TrendCare business rules and/or the actual on the day every quarter. For example, if 415 out of 420 staff hours were correctly split on the allocated staff screen (for example, HCAs were moved from housekeeping to 1:1 care), then the percentage compliance is 98.80% ( $415/420 \times 100$ ). This is the figure to enter into the quality checks tab against the KPI for '100% accuracy of split of hours'.

Ideally, you should have green traffic lights for all indicators on the quality checks tab. Having an orange will not stop you from proceeding but may impact the final FTE result's accuracy. A red traffic light indicates the data set is insufficiently accurate to allow the study to proceed in any but the most extreme situations. Exceptions to this should be discussed with your SSHW Programme Consultant.

The SSHW Unit Administrator manages the TrendCare quality check traffic lights for the KPIs. The colour is determined based on the following criteria:

DHB	KPI	Activity	Care Rationing	Staff Survey	Rationale	Role	Service	Setting	Shift	F T E Calc	Work Analysis	KPI	
Details											F T E Calc	Work Analysis	KPI
	100% of staff have undergone IRR testing in last 12 months									✓	✓	>=100% >=90% <90%	
	Minimum 60 acuity variables tested for each staff member									✓	✓	>=100% >=90% <90%	
	>=90% accuracy for each staff member									✓	✓	>=90% >=80% <80%	
	100% categorisation									✓	✓	>=100% >=90% <90%	
	100% actualisation									✓	✓	>=100% >=90% <90%	
	100% accuracy of worked roster									✓	✓	>=90% >=80% <80%	
	100% accuracy of split of hours									✓	✓	>=90% >=80% <80%	
	100% of patient types (>1% bed days) are within benchmark									✓	✓	>=100% >=90% <90%	

It is important to note that the target is 100% achievement, as per the TrendCare Gold standard. This ensures that the day to day operational uses of TrendCare (for acuity based nursing) are accurate. The lower thresholds of acceptability for the FTE studies is because the data set is much larger, i.e. 52 Monday morning shifts, rather than a single morning's data; this smooths out the impact of missing data.

The quality checks can also be exported to PDF for printing or inclusion in an FTE calculation report (see Step 14).

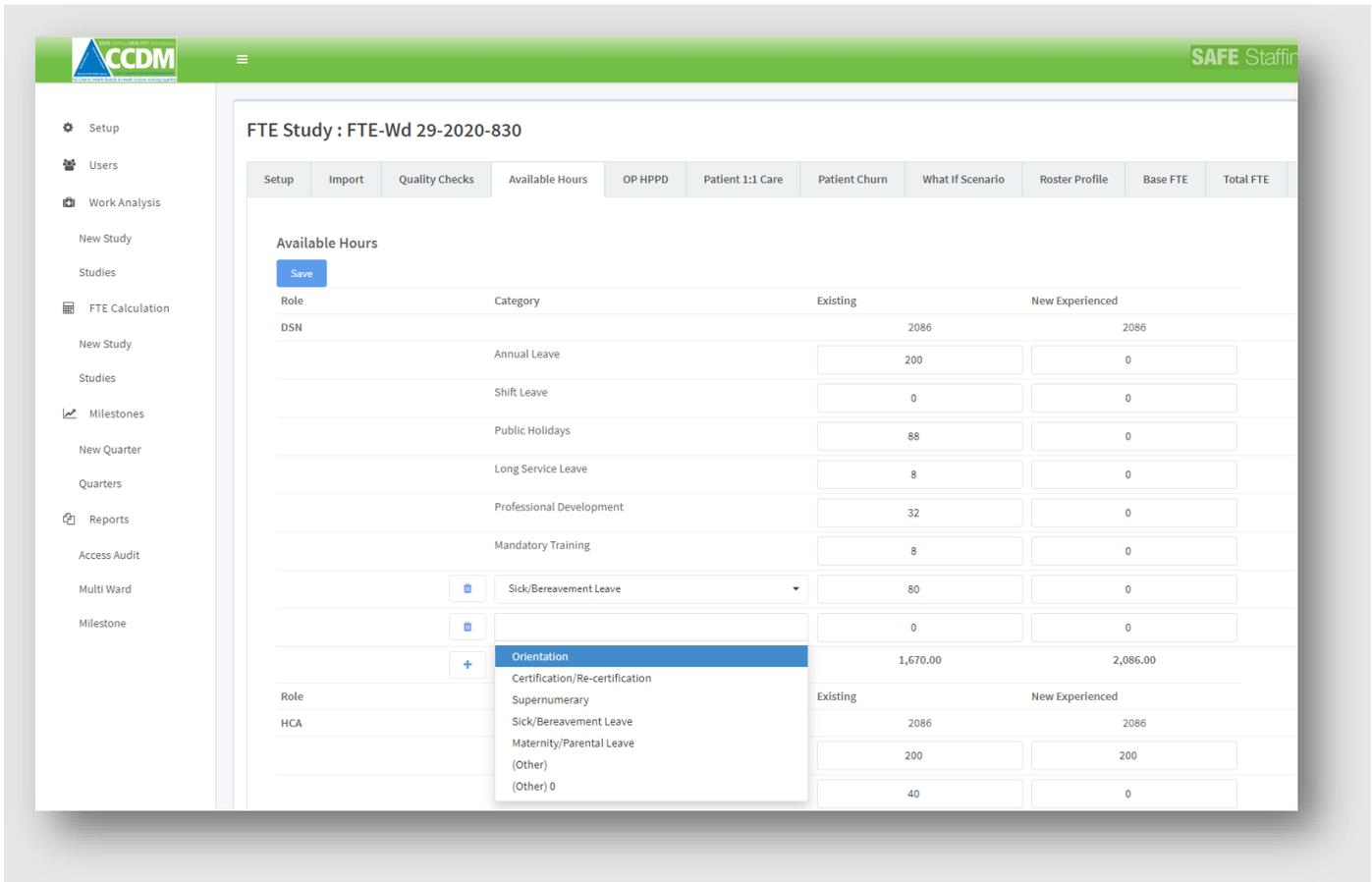
## Step 7 – Available hours

The Available Hours tab displays the total hours for a working year (2086 for 1.0FTE) less all the time that person cannot be available for working on the ward – such as annual leave, study leave, sick leave etc. Detailed information about calculating the available hours for staff is available in Appendix 1 – Available Staffing Hours. The DHB Site Administrator, DHB Read-Write User and SSHW Programme Consultant, can enter this data into the software.

The purpose of the available hours tab is to allow the software to calculate the amount of additional FTE required to 'backfill' staff's planned and unplanned leave entitlements. If a role isn't backfilled when staff are on leave, this leave should not be added to the available hour's tab as no FTE is required to cover the staff member. In areas/departments that shut down completely (such as over Christmas and New Year), the public holiday/annual leave must be reduced accordingly. This may make it appear that staff are not getting their full entitlements, but this tab is to calculate the leave backfill requirement; if none is needed, no hours should be entered.

The available hours' tab is laid out as follows:

1. The base and additional roles (selected by the User when they set up the study) will be displayed in the first column going down the tab—for example, RN, EN, and HCA.
2. The hours by experience level for the base roles are displayed in the second, third and fourth columns across the tab, i.e. existing nurse, new experienced nurse and new graduate.
3. The available hours for additional roles are for existing nurses or midwives only.
4. Bureau data entry field comes up automatically whether there is a budgeted FTE or not. This is so that the FTE for patient 1:1 care can be calculated when it is not included in the base roster. For the system to calculate 1:1 care, available hours for the bureau must be entered (as per the relevant DHB employment contract).
5. The system will calculate the total 'remaining available hours' at the end of each role.



Enter the hours allocated for annual leave, shift leave, public holidays, and so on for each role and experience level. Next, click on 'Other' and select from the drop-down list to add additional items like sick/bereavement leave, orientation, supernumerary time. If the item you are looking for is not included in the list, choose 'Other'. Optional items can also be deleted by using the trash can icon  next to the item. For fields with zero hours, simply enter '0'. Remember to click **Save** as you go.

At the bottom of the tab, there is an 'Approved by' field to enter who has approved the available hours, e.g. CCDM FTE Working Group. The fields are then locked to prevent further changes. If you want to revise the available hours, tick the check box next to 'Edit and re-approve'. This will unlock the fields and allow further changes.

Category	Hours
Professional Development	24
Mandatory Training	16
Sick/Bereavement Leave	80
Remaining avail. hours	1,738.00
CNM/CMM	2086
Annual Leave	200
Shift Leave	0
Public Holidays	40
Long Service Leave	8
Professional Development	24
Mandatory Training	24
Sick/Bereavement Leave	80
Remaining avail. hours	1,710.00

Approved By: FTE Working Group

Approved On: 2018-01-09

Save

Click **Save** when you are finished.

The available hours can also be exported to PDF for printing or inclusion in an FTE calculation report (see Step 15).

## Step 8 – Other productive HPPD

The other productive HPPD (OP HPPD) tab is where the Productive and Non-productive Hours Report from TrendCare is imported into the software. This can be done by the DHB Site Administrator, DHB Read-Write User and SSHW Programme Consultant once you have the required TrendCare csv files saved to your computer.

OP HPPD are all other productive hours that contribute to patient care delivery but are not 'clinical in department', 'shift coordination' or 'clinical administration'. Other productive hours includes (but is not limited to) for example:

- Clerical tasks (undertaken by nurses/midwives or HCAs)
- Housekeeping
- Environment and
- Quality improvement.

These are all indirect patient care or unit-related activities that are essential to delivering the service. Failure to account for these hours in the software may result in underbudgeting or care rationing.

Accounting for the other productive hours in the FTE calculation is a two-step process

1. Importing the productive and non-productive hours report from TrendCare
2. Selecting other productive hours to include in the FTE calculation

### *Selecting other productive hours to include in the FTE calculation*

The Productive and non-productive hours report is imported within the import tab (step 5). Once imported, the software will display:

- List of other productive hours
- The HPPD for each item and a
- A check box to select (or deselect) each item

The User needs to review the list of other productive HPPD and click on the check box of all items for inclusion. Refer to Table 2 for guidance.

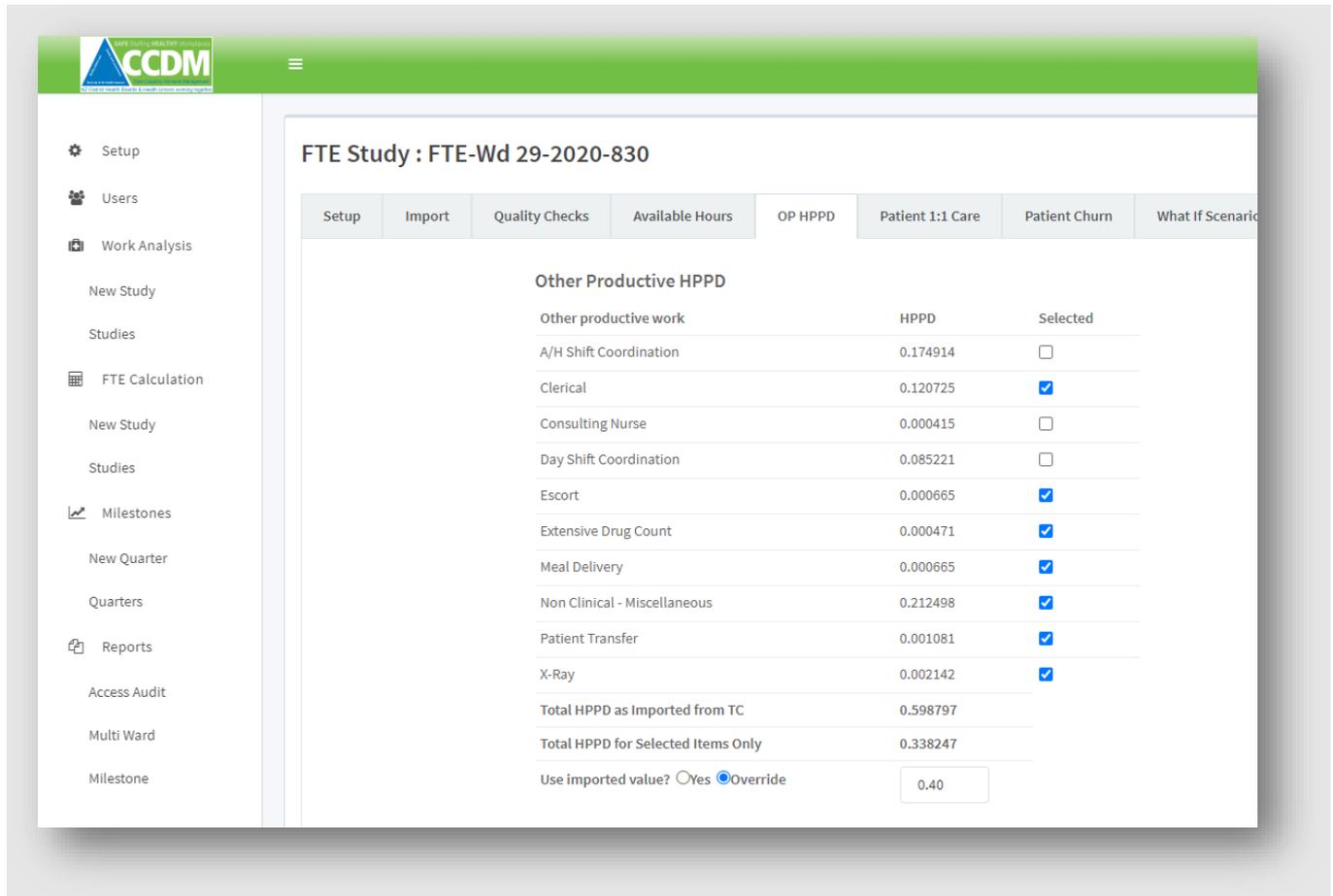


Table 2: Inclusion/exclusion criteria for other productive hours

Include	Exclude
<ul style="list-style-type: none"> <li>• All hours listed as productive (not otherwise included) that are reasonably expected to occur on all shifts, all days of the week.</li> <li>• Other productive hours are large enough to generate an HPPD. Benchmarks of other productive hours (if TrendCare data is incomplete or inaccurate)</li> <li>• SSHW Unit default range of 0.4 - 0.7 may be considered for medical-surgical wards with an average of 30 patients per day</li> </ul>	<ul style="list-style-type: none"> <li>• Clinical in Department (the acuity requirement of the patients will be obtained from the Ward Shift Variance Report when the report is imported into the software).</li> <li>• Clinical Administration (nurse/midwife manager) most likely not performed on all shifts/days of the week. Is accounted for separately in the software under the Additional Roles.</li> <li>• Shift coordination (this is accounted for later in the Setup tab under Base Roles and Shift Coordination Hours)</li> <li>• Non-Productive hours (these are accounted for on a separate tab when calculating the staff available hours).</li> <li>• Other categories of work (e.g. Clinic, Antenatal Clinic) which are not expected to occur on all shifts, all days of the week. These are accounted for separately in the software under the Additional Roles by selecting Clinic.</li> <li>• Clerical undertaken by clerical staff (this is accounted for separately under additional roles).</li> </ul>

Once the User has completed selecting the OP HPPD for inclusion, the software will automatically calculate the total HPPD. In the example below, the total HPPD for the selected items = 0.338247. At this point, the

User can click on 'use imported value' or 'override' this value with another, as happens in this example. This tab saves changes automatically following any change.

The software calculates the number of hours allocated to each shift and day based on the OP HPPD. This can be seen at the bottom of the tab. The purpose of this table is to inform users of how much time is allocated for Other Productive work each shift. In conjunction with the tasks being completed, this information allows more informed decision-making when selecting a skill mix for the roster.

The screenshot shows the CCDM software interface. The sidebar on the left contains navigation options: Setup, Users, Work Analysis, New Study, Studies, FTE Calculation, New Study, Studies, Milestones, New Quarter, Quarters, Reports, Access Audit, Multi Ward, and Milestone. The main content area displays a list of tasks with their respective HPPD values and checkboxes for selection. Below this is a table titled 'Other productive hours applied each shift' showing hours for AM, PM, and Night shifts across the days of the week. A 'Comment' field is also present at the bottom.

	AM	PM	Night
Monday	5.4077	4.3550	2.6467
Tuesday	5.4736	4.4119	2.6736
Wednesday	5.3351	4.4102	2.6289
Thursday	5.3539	4.3966	2.6331
Friday	5.3695	4.0768	2.4625
Saturday	4.9235	3.9348	2.4988
Sunday	4.9930	4.0573	2.7116

OP HPPD to use in the software is a CCDM FTE Working Group (or equivalent) decision. The items selected for inclusion should be:

- Made on a ward by ward basis
- Consistent with the ward/unit context, e.g. telemetry monitoring
- Sense checked, e.g. compare the hours generated by housekeeping with HCAs' actual work hours (where applicable). This can be seen by deselecting all the indicators except the indicator you want to sense check. The average hours allocated by shift and day for the study period will be displayed.
- As per the DHB business rules for the use of the Staff Allocate screen

Decisions made by the FTE Working Group should also be fair and equitable between wards. So in most circumstances, it is recommended that you use the other productive HPPD from TrendCare. However, you may override the other productive HPPD if the TrendCare data is considered unreliable or incomplete.

There are occasions when the other productive HPPD may appear high, e.g. 1.2 HPPD. There are four scenarios where this occurrence is more likely:

1. A paediatric ward where HCAs hours do not contribute to clinical in department with their hours recorded in the Allocate Staff Screen under environment, housekeeping or similar. In this situation, consider moving the HCA's hours to the Additional Roles 'HCA Non-Clinical' and exclude this indicator.
2. A speciality unit, e.g. ICU, where there is no HCA and patient numbers are relatively small compared with a general medical or surgical ward.
3. Inappropriate inclusion of other productive HPPD that occurs mainly during regular business hours, e.g. exercise tolerance tests, ECT
4. Units where substantial time is spent monitoring patients outside the ward, telemetry units, for example

Where the higher HPPD can be reasonably explained, and the consequence of using this in the software is understood, then the actual other productive HPPD can be used. NOTE: each 0.20 HPPD is equivalent to approximately 1.0 FTE in a ward with an average of 30 patients per day.

A comments section sits at the bottom of the tab, and this allows contextual comments to be included. This information may help explain decision making to the broader audience when the report is circulated.

**User tip 13 – Sense checking an OP HPPD item**

Sense checking the OP HPPD is a useful skill when the user wishes to understand the proportion of OP HPPD a single task equaltes too. This can be useful when building the skill mix into the roster and the user needs to understand what proportion of OP HPPD are Regulated role vs unregulated.

Other Productive HPPD		
Other productive work	HPPD	Selected
Breast Feeding Classes	0.00389	<input type="checkbox"/>
Clerical	0.379802	<input type="checkbox"/>
Escort	0.01394	<input checked="" type="checkbox"/>
Housekeeping	0.381504	<input type="checkbox"/>
Medical Emergency	0.00389	<input checked="" type="checkbox"/>
Miscellaneous	0.00389	<input type="checkbox"/>
Specialist Nurse/Midwife Inp.	0.896498	<input type="checkbox"/>
Telemetry	3.041578	<input checked="" type="checkbox"/>
X-Ray	0.000729	<input checked="" type="checkbox"/>
<b>Total HPPD as Imported from TC</b>	<b>4.725721</b>	
<b>Total HPPD for Selected Items Only</b>	<b>3.060137</b>	
Use imported value? <input checked="" type="radio"/> Yes <input type="radio"/> Override	3.06	

Other productive hours applied each shift			
	AM	PM	Night
Monday	8.9448	6.7545	6.7850
Tuesday	10.0322	7.0174	6.5754
Wednesday	8.8391	6.8103	6.3915
Thursday	8.2552	6.4091	6.2236
Friday	7.8539	5.8950	5.4759
Saturday	6.7570	5.2767	5.7941
Sunday	7.4178	6.0361	6.4582

Other Productive HPPD		
Other productive work	HPPD	Selected
Breast Feeding Classes	0.00389	<input type="checkbox"/>
Clerical	0.379802	<input type="checkbox"/>
Escort	0.01394	<input type="checkbox"/>
Housekeeping	0.381504	<input type="checkbox"/>
Medical Emergency	0.00389	<input type="checkbox"/>
Miscellaneous	0.00389	<input type="checkbox"/>
Specialist Nurse/Midwife Inp.	0.896498	<input type="checkbox"/>
Telemetry	3.041578	<input checked="" type="checkbox"/>
X-Ray	0.000729	<input type="checkbox"/>
<b>Total HPPD as Imported from TC</b>	<b>4.725721</b>	
<b>Total HPPD for Selected Items Only</b>	<b>3.041578</b>	
Use imported value? <input checked="" type="radio"/> Yes <input type="radio"/> Override	3.04	

Other productive hours applied each shift			
	AM	PM	Night
Monday	8.8863	6.7104	6.7407
Tuesday	9.9667	6.9715	6.5324
Wednesday	8.7813	6.7658	6.3497
Thursday	8.2013	6.3672	6.1829
Friday	7.8025	5.8565	5.4401
Saturday	6.7128	5.2422	5.7563
Sunday	7.3694	5.9967	6.4160

Within the example above it can be clearly seen that telemetry monitoring constitutes the vast majority of the OP HPPD and requires an regulated staff member to provide this care.

Although this is an extreme example, this process allows the user to sense check the accuracy of the Allocate Staff screen by reviewing the OP HPPD vs actual hours this equates to.

**User tip 14 – Impact of patient numbers per day and OP HPPD**

The display at the bottom of the OP HPPD tab demonstrate the average number of OP hours that will be added to each day and shift across the year. The actual number of hours added to the blue wiggly line in the 'What If' for each day and shift will vary depending on the actual number of patients for the shift.

The impact of this within the 'What if' graphs is a day / shift with a large number of patients will be allocated a greater number of OP HPPD hours. For wards with a high OP HPPD which experience a shift with an unusually high number of patients this will cause a significant 'peaking' in the graph and may in turn impact your ability to achieve the correct deficits level while also passing a sense check.

Impact on the OP HPPD hours added to the Blue line in the 'What if' graphs of an unusually busy day

Typical day		Unusually busy day	
OP HPPD	1	OP HPPD	1
Patient days	30	Patient days	45
Daily hours	30	Daily hours	45
AM (55%)	16.5	AM (55%)	24.75
PM (33%)	9.9	PM (33%)	14.85
Night (12%)	3.6	Night (12%)	5.4

In the example above, the typical morning shift would have 16.5 hour added to it for OP HPPD work. On the busy day this increases to 24.75 hours.

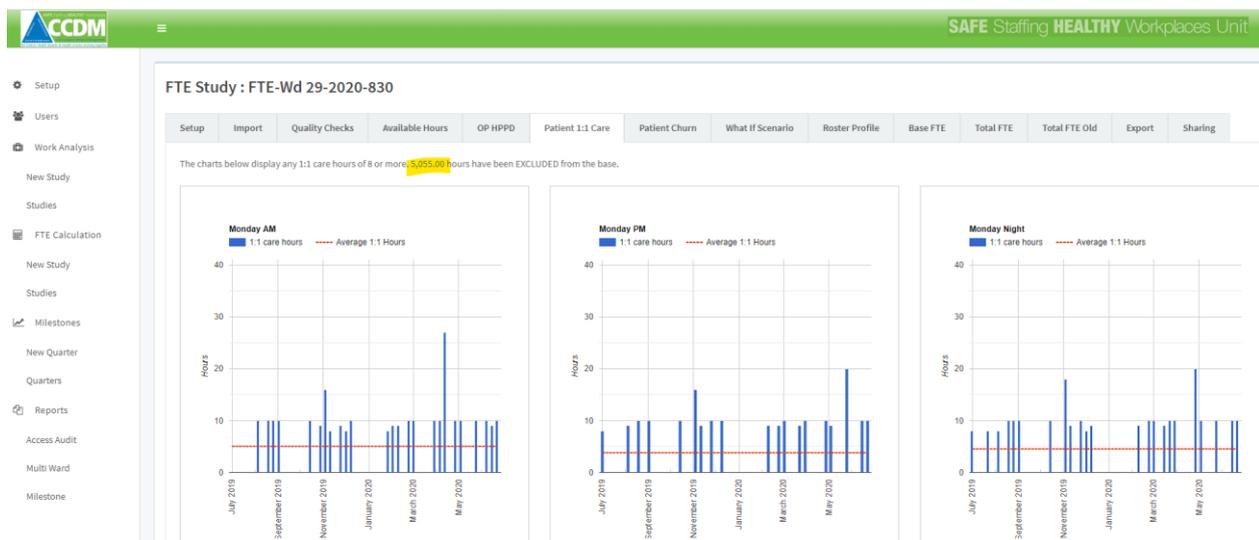
When trying to achieve the correct level of deficits, consideration should be given to the possibility of busy shift creating artificially high OP HPPD, creating a staffing requirement that is excessive to actual. This can be confirmed by reviewing the Ward Period Shift Variance report (this reports can be created by weekdays, i.e. just Mondays).

This report totals the number of patients within a ward for a specific shift/day; by comparing the number of patients on a specific Monday AM shift against other Mondays it can be identified if abnormal volumes have occurred. In such situations consider adjusting the deficit target for that shift/day.

## Step 9 – Patient 1:1 care

The Patient 1:1 Care tab displays the 1:1 care hours of eight hours or more. The part 1:1 care hours are not included (6hrs or less per patient). These part 1:1 care hours are included in the total care hours required (blue squiggly line) on the 'What if' Scenario charts.

The Patient 1:1 care charts data is imported from the TrendCare Ward Patient One on One Care Report. The total 1:1 care hours of 8 hours or more are displayed as bars for each day and each shift. The red line is the average 1:1 care hours for that day and that shift.



Knowing the pattern of 1:1 care can support decision making about whether to:

- Include the 1:1 care hours of 8 hours or more in the base roster, e.g. 1:1 care occurring every shift every day.
- Include part of the FTE needed for 1:1 care hours of 8 hours or more in the base roster, e.g. 1:1 care mainly occurring on night duty, so base FTE on nights increased only, remaining FTE required allocated to bureau budget.
- Exclude 1:1 care of 8 hours or more from the base roster, e.g. 1:1 care requirements are irregularly irregular, so the total FTE required for 1:1 care is allocated to the bureau budget.

**User tip 14 – Display of the patient 1:1 care charts**

The Ward Patient One on One report must be imported for the charts on the Patient 1:1 Care tab to be displayed. The charts show all 1:1 care hours of 8 hours or more. The charts do not show part 1:1 care hours. If you hover over any data point on the chart a pop-up box will display the actual 1:1 care hours that were provided on that date.

Where the check box for 'Include patient 1:1 care' is ticked on the Setup page, the note at the top of this tab will state '...these hours have been Included in the base'. Where the check box has not been ticked on the Set-up tab the note at the top of this tab will state '...these hours have been Excluded from base'.

**FTE Study : FTE-Wd 29-2020-830**

Setup	Import	Quality Checks	Available Hours	OP HPPD	Patient 1:1 Care	Patient Churn
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The charts below display any 1:1 care hours of 8 or more. **5,055.00 hours have been EXCLUDED from the base.**

**Monday AM**

■ 1:1 care hours    - - - - Average 1:1 Hours

**Monday PM**

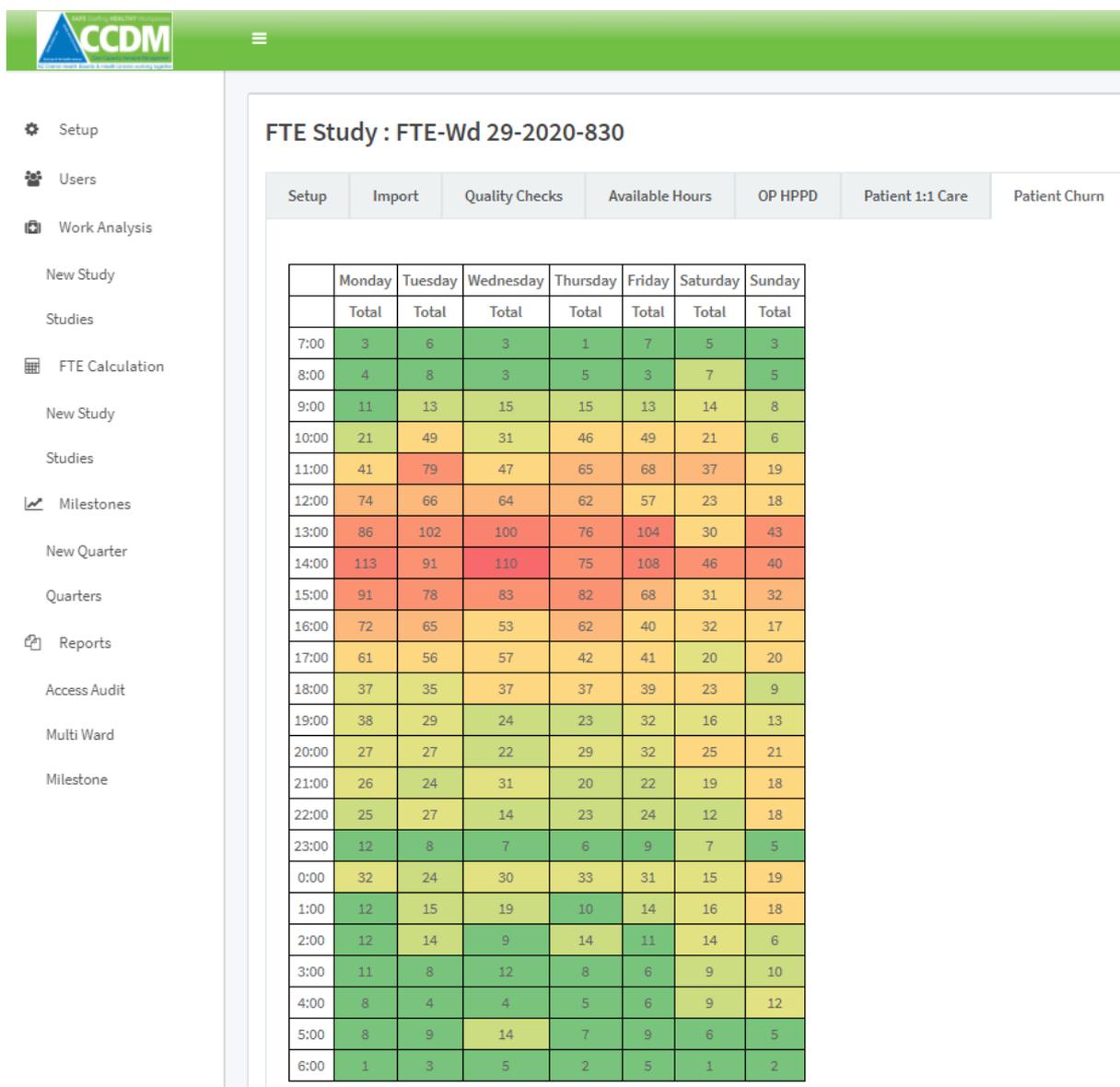
■ 1:1 care hours    - - - - A

## Step 10 – Patient Churn

Step 10 is the Patient Churn tab, where you can visualise the churn (movement of patients into and out of a ward) for the ward by day and hour for the year. This information allows enhanced decision making when creating rosters by enabling the User to see peak churn activity. Understanding this activity encourages appropriate shift times and patterns to meet actual demand.

As shown below, the churn chart shows activity by hour and day and has a heatmapping applied to draw attention to peak activity periods. The Heat map uses colours based on the value of the cell. Periods of low activity being dark green and red cells are indicating the periods of maximum churn.

The colour range is based on the lowest to the highest level of activity. In smaller units or those with a low patient turnover, the colours may misrepresent the degree of actual activity.



In order to understand the activity on a specific day in greater detail, click anywhere on that days column and the days activity unfolds to reveal the number of individual transfers in and out, admissions and discharge.

	Monday	Tuesday	Wednesday					Thursday	Friday	Saturday	Sunday
	Total	Total	Admissions	Discharges	T in	T out	Total	Total	Total	Total	Total
7:00	3	6	1	1	1	0	3	1	7	5	3
8:00	4	8	2	1	0	0	3	5	3	7	5
9:00	11	13	2	7	3	3	15	15	13	14	8
10:00	21	49	3	23	2	3	31	46	49	21	6
11:00	41	79	6	30	7	4	47	65	68	37	19
12:00	74	66	7	48	7	2	64	62	57	23	18
13:00	86	102	11	59	20	10	100	76	104	30	43
14:00	113	91	14	65	28	3	110	75	108	46	40
15:00	91	78	12	43	21	7	83	82	68	31	32
16:00	72	65	13	25	13	2	53	62	40	32	17
17:00	61	56	17	20	11	9	57	42	41	20	20
18:00	37	35	12	11	13	1	37	37	39	23	9
19:00	38	29	7	5	9	3	24	23	32	16	13
20:00	27	27	8	5	6	3	22	29	32	25	21
21:00	26	24	15	3	11	2	31	20	22	19	18
22:00	25	27	9	1	2	2	14	23	24	12	18
23:00	12	8	6	0	1	0	7	6	9	7	5
0:00	32	24	15	7	5	3	30	33	31	15	19
1:00	12	15	15	1	3	0	19	10	14	16	18
2:00	12	14	6	0	2	1	9	14	11	14	6
3:00	11	8	10	0	2	0	12	8	6	9	10
4:00	8	4	1	0	1	2	4	5	6	9	12
5:00	8	9	9	0	4	1	14	7	9	6	5
6:00	1	3	4	0	1	0	5	2	5	1	2

This information is intended to support users during the 'What if Scenario' tab when creating the roster.

Users should use this information to consider:

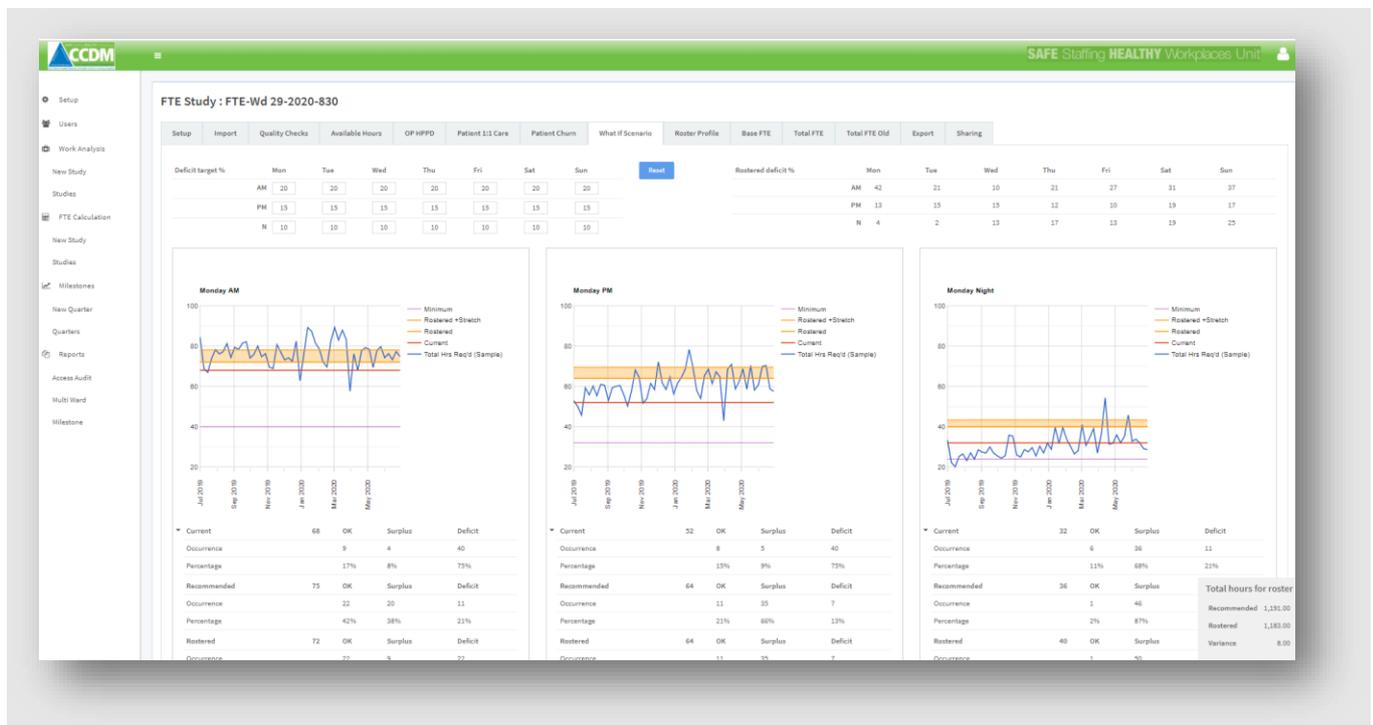
- What is the best start time to maximise efficiency
- Are entire shifts needed? would two four hour shifts meet need better (such as 11:00 – 15:00 hr) rather than a single eight-hour shift
- What staff roles are required in order to complete this activity? Regulated or non-regulated? Skill mixes do not need to be a constant
- Would staff be receptive to new shift patterns if required? Preparation work to establish this should be considered. Flexibility in work patterns to accommodate staff needs has been shown to increase staff retention and satisfaction

## Step 11 – What if scenario

Step 11 is the What if Scenario tab, where you get to review the total care hours required against the current roster from the setup tab and adapt it to reflect the recommended roster based on the data and acceptable deficits entered into the study. This is also known as roster testing. The DHB Site Administrator, DHB Read-Write User and SSHW Programme Consultant, can adjust the roster within this tab.

On the What if Scenario tab, four distinct sections are displayed

1. The Deficit target % and Rostered deficit % tables (at the top of the tab).
2. Charts for each day and shift with the Current, Recommended and Rostered hours (below the Deficit charts).
3. The planned roster for the shift; the roster in the Setup tab initially populates this
4. Total hours for roster box. This feature 'floats' in the lower right corner of the screen



### Deficit target % and Rostered deficit % tables

In a new study, the Deficit target % table is empty when viewed for the first time. Populating the table with the agreed acceptable deficit levels for each day and shift changes the recommended hours displayed within the charts below to indicate the number of rostered hours required to match the deficit. It is often impossible for the software to calculate the exact percentage required because the roster is based on hourly increments. Smaller increments of time are generally required to create an exact match.

The Deficit table can be cleared entirely by selecting the blue reset button or over typing the figure entered. If a shift has been finalised (see the roster section below for details), it can not be changed or reset. When finalised, the box for the shift greys out.

When viewed for the first time, the Rostered deficit % table displays the current rosters' deficits (based on the roster in the setup tab). Once changes are made to the rosters within this tab, the Rostered Deficit % table will automatically update to reflect the new roster.

FTE Study : FTE-Wd 29-2020-830

Setup	Import	Quality Checks	Available Hours	OP HPPD	Patient 1:1 Care	Patient Churn	What If Scenario	Roster Profile	Base FTE	Total FTE	Total FTE Old	Export	Sharing
-------	--------	----------------	-----------------	---------	------------------	---------------	------------------	----------------	----------	-----------	---------------	--------	---------

Deficit target %	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Reset
AM	20	20	20	20	20	20	20	
PM	15	15	15	15	15	15	15	
N	10	10	10	10	10	10	10	

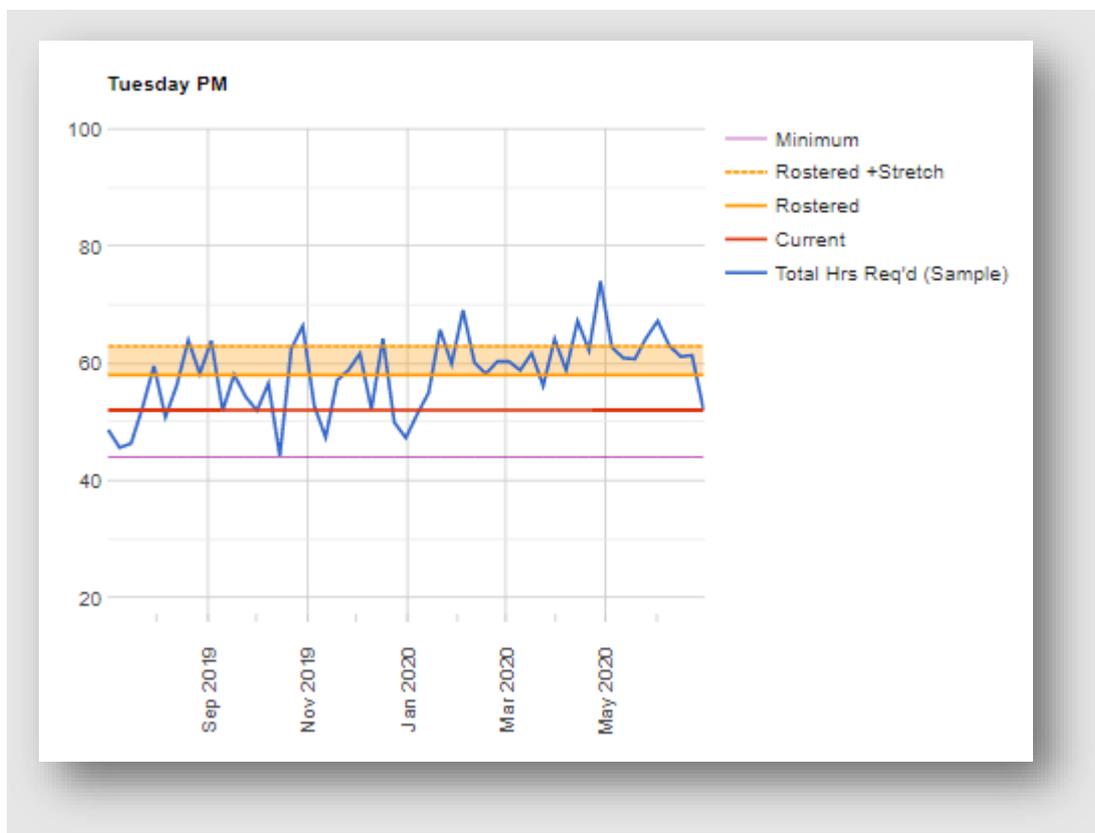
  

Rostered deficit %	Mon	Tue	Wed	Thu	Fri	Sat	Sun
AM	42	21	10	21	27	31	37
PM	13	15	15	12	10	19	17
N	4	2	13	17	13	19	25

These tables, when viewed together, allow the User to compare rostered deficits against the planned/agreed deficits levels without having to scroll down the entire page; they also will enable the User to identify unfinalised days at a glance

*Charts for each day and shift with the Current, Recommended and Rostered hours*

Charts are displayed for every day of the week and covering the three shifts.

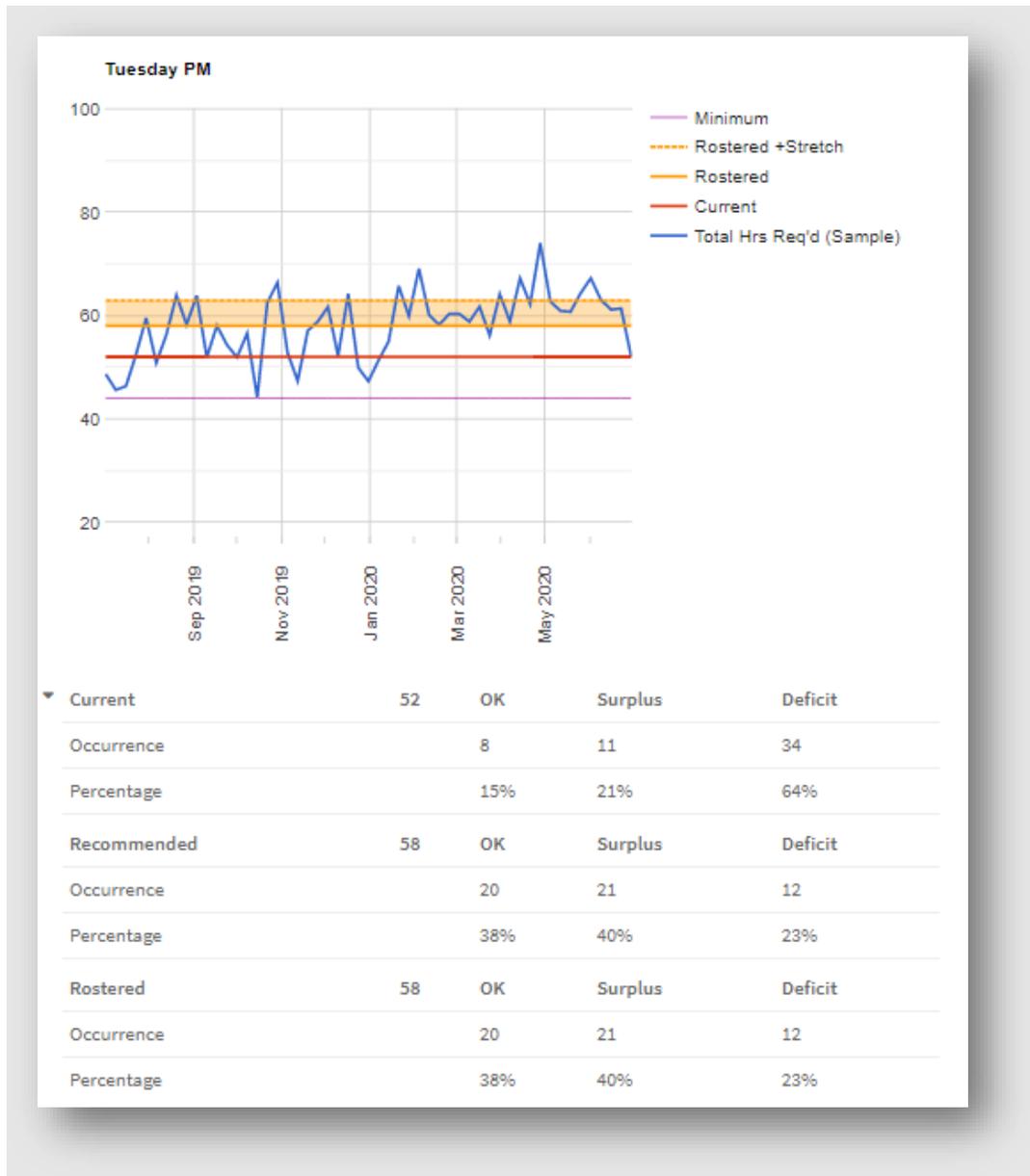


The chart displays hours (on y-axis) and the dates across the year for that day (on x-axis):

- The blue zig-zag line comprises the total hours of care required ['Total Hrs Req'd (Sample)']. It includes patient hours required by acuity, 12.5% buffer, and other productive hours shift coordination hours and one to one care hours greater than 8 hours if included in the base roster. All part one on one care hours are automatically included in the line.
- The red solid horizontal line labelled 'Current' is the roster's hours from the Rostered Base FTE from the setup tab.

- If a minimum staffing level is set, this is displayed as hours on the chart as a mauve horizontal line ['Minimum'].
- This shift's Rostered level is shown as a solid horizontal line in yellow ['Rostered'].
- The Roster level plus stretch is shown as a yellow shaded area between the solid and dotted yellow line ['Rostered + Stretch']. The stretch is 8.5% for unexpected workload and is less than the 12.5% buffer described above to protect staff breaks.

Hovering your mouse over any of the lines on the chart will be displayed specific data points, along with the date.



Below each shift, there is a table showing:

- The Current rostered hours for this shift, e.g. 52 hours. Below is a breakdown of the number of shifts and the percentage of shifts that are OK (n = 8 or 15%), surplus (n = 11 or 21%) or deficit (n = 34 or 64%). OK, Surplus and deficit are defined as follows:
  - OK = Shifts, where the hours required to fall between 'current, rostered hours' and 'current rostered hours + 8.5%' (staffing for the shift was satisfactory)
  - Surplus = Shifts, where the hours required are less than the 'current rostered hours' (was excess staff to the requirement on that shift)

- Deficit = Shifts, where the hours required were more than 'current rostered hours + 8.5%' (there were insufficient staff to cater for patient demand on this shift); this is also known as a shift below target.
- The Recommended hours to roster for this shift, e.g. 58 hours. The recommended roster is calculated in the first instance by the software. (The software calculation of this is detailed in the FTE calculation supplement – The maths behind the software). This calculation is overwritten when a change is made within the Deficit target % table. In this example, the Deficit target % table has been completed resulting in a recommendation of 58 hours. Below this is a breakdown of the number of shifts and percentage of OK (n = 20 or 38), surplus (n = 21 or 40%) and deficit (n = 12 or 23), where:
  - OK = hours between 'Rostered' and 'Rostered + stretch' (staffing for the shift would be satisfactory)
  - Surplus = Shifts, where the hours required are less than the 'current rostered hours' (was excess staff to the requirement on that shift)
  - Deficit = Shifts, where the hours required were in excess of 'current rostered hours + 8.5%' (there were insufficient staff to cater for patient demand on this shift)
- The Rostered hours are the number of hours rostered within the roster below the table, e.g. 58 hours. Below this is a breakdown of the number of shifts and percentage of OK (n = 20 or 38), surplus (n = 21 or 40%) and deficit (n = 12 or 23), where:
  - OK = hours between 'Rostered' and 'Rostered + stretch' (staffing for the shift would be satisfactory)
  - Surplus = Shifts, where the hours required are less than the 'current rostered hours' (was excess staff to the requirement on that shift)
  - Deficit = Shifts, where the hours required were in excess of 'current rostered hours + 8.5%' (there were insufficient staff to cater for patient demand on this shift)

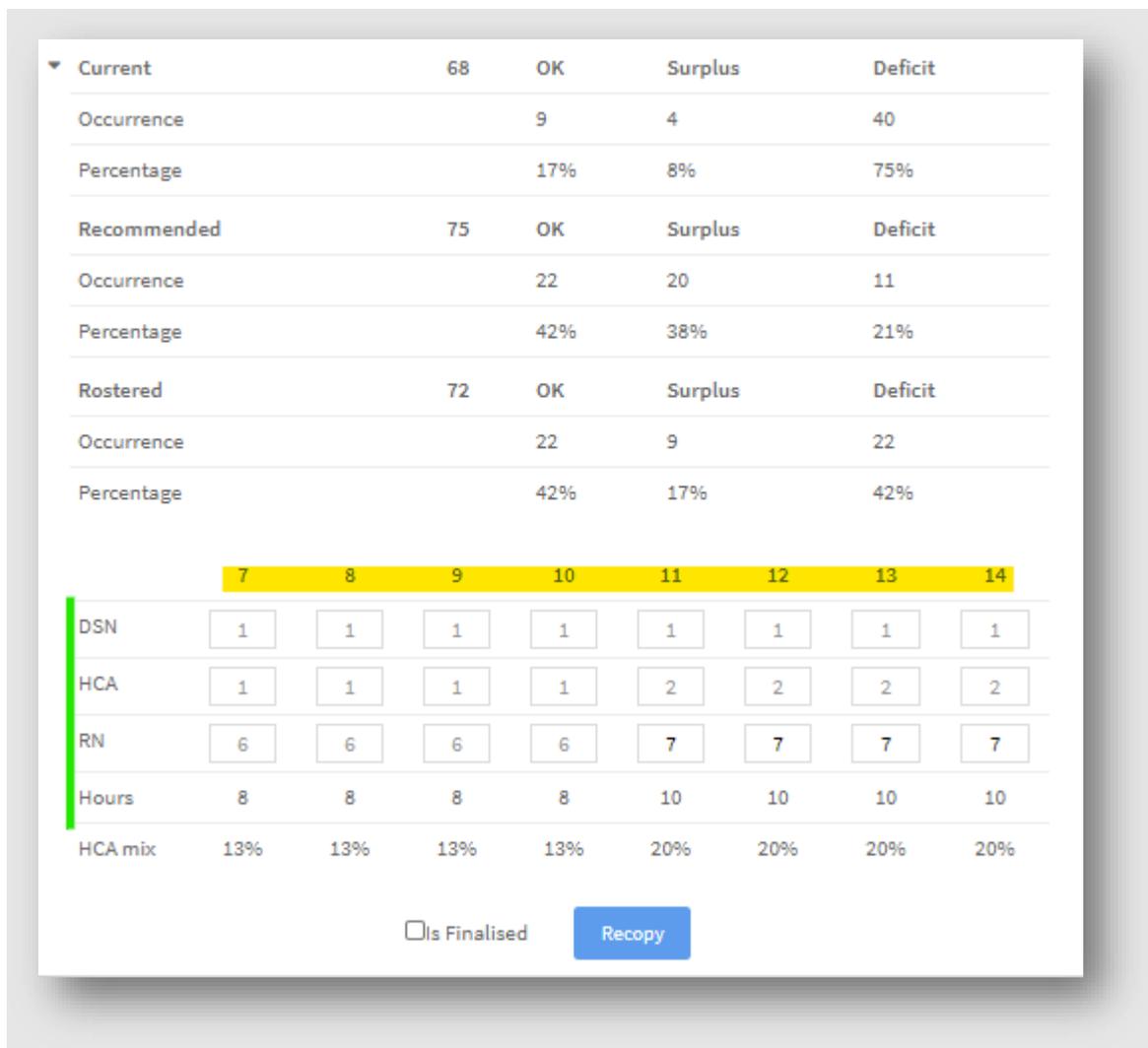
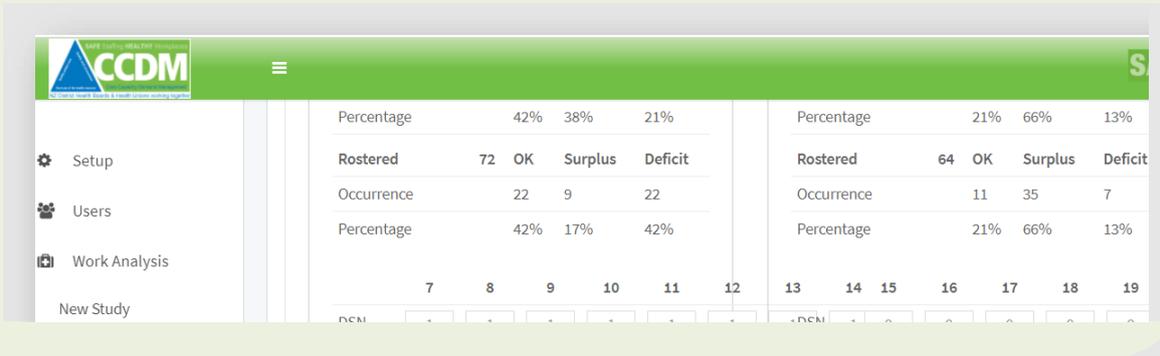
The Recommended hours are changed by populating/adjusting the deficit target % table, and the Rostered hours are increased or decreased by adjusting the planned roster.

### *Planned Roster*

The planned roster is initially populated from the base roster entered into the setup tab. Coordination hours from the setup tab are combined with the role the software believes most likely to be coordinating. The hierarchy for this allocation is DSN – DSM – RN – RM. If the coordination hours are misallocated, manually correct the distribution by overwriting hours in the roster fields.

**User tip 15 – How to correct the roster fields from over lapping**

If a computer has ‘zoomed in’ the screen, the shift hours of the day will extend beyond intended shift. This can be corrected by pressing Ctrl winding the mouse wheel backwards (towards the user). The optimum zoom for this screen is 90 to 100%



The snip above shows a morning shift, running from 07:00 through to 14:00 in single hour units (highlighted in yellow). The roster is built by allocating hours required by roles (highlighted in green), against each hour of the day, with the total for each hour at the bottom. If a new role is required (such as employing an EN), the User should return to the setup screen, click on the EN role in Budgeted Base FTE

and click on save (but not add any hours on the setup tab). Then, click on the 'Recopy' button, and the new role appears for the shift within the 'What if' tab.

Selection of the planned roster should be carried out by the CNM, their line manager (if this is not a nurse, the nursing leader for the service) and the health union representative. Others, as appropriate, may also take part. The hours selected for each shift and role each day of the week should be based on a number of contextual factors, including staff mix, skills mix, ward/unit supports, type of service, access to casual staff, variance response management process, systems, and hospital management, particularly after-hours. The staggered shift start times, need to meet the clinical need and MECA requirements. The use of the Churn chart and OP HPPD tasks will offer insights into times and roles required across the day. Revisiting these tabs, or printing them before creating the roster is recommended for easy reference.

Adjust the hours apportioned to each role for each shift to create a roster that matches the recommended hours for the shift as closely as is practical. In the example above, 72 hours have been rostered; the recommended hours to rostered are 75 hours. Three more hours need rostering to move the deficit from 42% to the accepted deficit of 21% (which is as close to the agreed 20% deficit % that the software can calculate using whole hours).

As the roster is adjusted to create practical shifts, the yellow line and shaded area will move up or down on the corresponding chart. The software also simultaneously recalculates the number of shifts that are OK, Surplus or Deficit. The goal is to get the agreed level of deficit appropriate to the time of day, shift and ward/unit context with a workable shift roster.

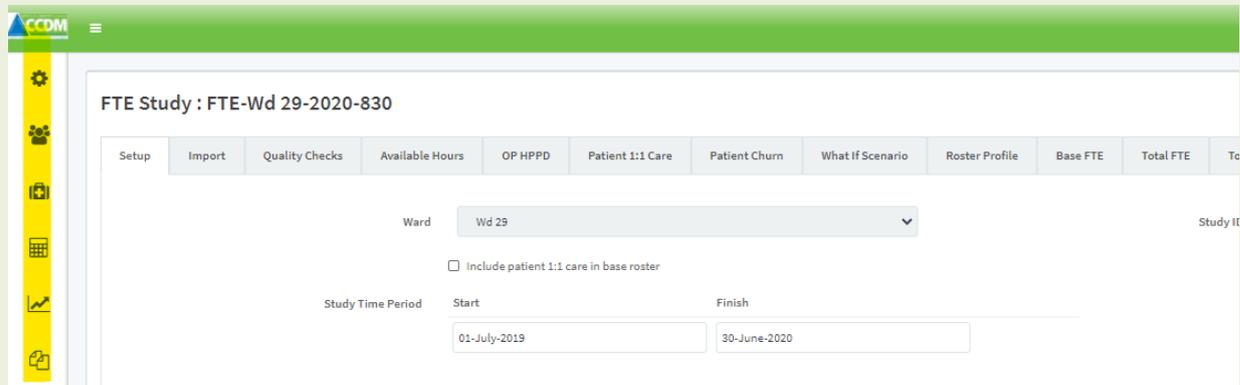
To support decision making and ensure appropriate skill mixes, the row below each rostered shift contains the percentage of the HCA workforce for each hour. The 'right' percentage of HCA's depends on the ward type, environment and model of care used. SSHW does not have a recommended percentage due to the vast number of variables contributing to a ward's 'right' percentage.

Tick the 'Is Finalised' box when you have selected the roster hours that best match patient demand for a shift. You cannot further adjust the roster on a shift that has the 'Is Finalised' box ticked. You can un-check the 'Is finalised' box if you want to make further changes. All shifts must be finalised before the study can be marked as a 'Finalised study' on the FTE Studies tab.

All changes are automatically saved, and a green 'Save complete' box  appears at the top of the screen following each change to the roster.

### User tip 16 – Collapsing the main menu to increase chart size

The main menu can be collapsed to provide you with more screen room. To collapse the main menu list, click on the three lines  next to the CCDM logo. The main menu will then appear with the symbols only, providing more screen room for displaying the tabs. This can be useful if you are working from a small computer screen or projecting onto a screen for example, when running a roster testing session using the What if Scenario tab.



### Total hours for hours roster box

Total hours for roster	
Recommended	1,191.00
Rostered	1,176.00
Variance	15.00

This box is located in the lower right-hand corner of the screen and remains in this position when the User scrolls up and down the tab. The box informs the User what the total weekly recommended hours are.

As the roster is populated, the actual rostered hours are tallied, and variance is displayed. In this example, 15 additional hours can be rostered before the hours rostered meet the recommended number of hours required.

The What if Scenario charts can be exported to PDF for printing or copying and pasting into a report (see Step 15 of this User Guide). Printing may be helpful if you are discussing the recommended roster with key stakeholders, e.g. CNM, Service Manager and Health Union representative. However, the most effective strategy is to project the software graphs onto a wall, adjust and agree on the hours required with the key stakeholders in real-time. This enables the stakeholders to see the consequences of decision-making immediately and facilitates trial and error until the best-matched roster is obtained.

# Step 12 – Roster profile

Getting the planned roster right is a critical first step in effective care capacity demand management. The average 30-bed medical/surgical roster costs 2 to 2.5 million dollars per annum, not to mention the cost to patients and staff of poor quality care or poor quality work environment.

The Roster Profile tab is populated from the roster created in the ‘What If Scenario’ tab and the additional roles section of the setup tab. The roster shows staffing by shift, hour and role. The total FTE’s for each role and shift are also displayed.

		AM						PM						N														
Role		7	8	9	10	11	12	13	14	FTE	15	16	17	18	19	20	21	22	FTE	23	0	1	2	3	4	5	6	FTE
Monday	DSN	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	HCA	1	1	1	1	2	2	2	2	1.5	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
	RN	6	6	6	6	7	7	7	7	6.5	7	7	7	7	7	7	7	7	7	5	5	5	5	5	5	5	5	5
	Clerical	0	1	1	1	1	1	2	2	1.125	2	1	1	1	0	0	0	0	0	0.625	0	0	0	0	0	0	0	0
	CNM/CMM	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DSN/M	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0
Tuesday	DSN	2	2	2	2	1	1	1	1	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	HCA	1	1	1	1	1	2	2	2	1.375	2	2	2	2	2	2	1	1	1.75	0	0	0	0	0	0	0	0	0
	RN	6	6	6	7	7	7	7	7	6.625	6	6	6	6	6	6	6	6	6	6	5	5	5	5	5	5	5	5
	Clerical	0	1	1	1	1	1	2	2	1.125	2	1	1	1	0	0	0	0	0	0.625	0	0	0	0	0	0	0	0
	CNM/CMM	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DSN/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Wednesday	DSN	2	2	2	2	1	1	1	1	1.5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	HCA	1	1	1	1	2	2	2	2	1.5	2	2	2	2	2	2	2	1	1.875	0	0	0	0	0	0	0	0	0
	RN	7	7	7	7	7	7	7	7	7	6	6	6	6	6	6	6	6	6	6	4	4	4	4	4	4	4	4
	Clerical	0	1	1	1	1	1	2	2	1.125	2	1	1	1	0	0	0	0	0	0.625	0	0	0	0	0	0	0	0
	CNM/CMM	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DSN/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thursday	DSN	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	HCA	1	1	1	1	2	2	2	2	1.5	2	2	2	2	2	2	2	2	2	0	0	0	0	0	0	0	0	0
	RN	7	7	7	7	7	7	7	7	7	6	6	6	6	6	6	6	6	6	6	4	4	4	4	4	4	4	4
	Clerical	0	1	1	1	1	1	2	2	1.125	2	1	1	1	0	0	0	0	0	0.625	0	0	0	0	0	0	0	0
	CNM/CMM	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	DSN/M	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

The roster for base staffing cannot be changed on this tab. To make changes to the base staffing, the User must return to the ‘What If Scenario’s’ tab and change the roster to the corrected figure. **Remember,** changes to the roster are likely to impact the deficits for that shift. These changes must be made within the partnership principles.

This roster also displays the additional roles as recorded on the setup tab. Changes to the Additional staffing roles hours can be made on this tab by overwriting the grey boxes' hours. Changes will appear in black to be easily identified (as demonstrated in the DSN/M row below). Changes to the additional role hours will impact the Total FTE tabs, but not the setup tab figures that will remain the same.

FTE Study : FTE-Wd 29-2020-830

Setup	Import	Quality Checks	Available Hours	OP HPPD	Patient 1:1 Care	Pat				
AM										
	Role	7	8	9	10	11	12	13	14	FTE
Monday	DSN	1	1	1	1	1	1	1	1	1
	HCA	1	1	1	1	2	2	2	2	1.5
	RN	6	6	6	6	7	7	7	7	6.5
	Clerical	0	1	1	1	1	1	2	2	1.125
	CNM/CMM	1	1	1	1	1	1	1	1	1
	DSN/M	1	1	1	1	1	1	1	1	1

Once final changes have been made to the roster, the Roster profile tab needs to be approved to 'lock in' the roster. This approval is time and date stamped, and no further edits can be made unless the approval is removed by selecting the  Edit and re-approve tick box. Approval confirmation is required to select the 'Finalised study' tick on the FTE Studies menu.

The roster profile should be used as the template for all future rosters until such time as the annual FTE calculation is repeated. It is the model against which the posted roster is audited to establish if there are roster gaps. If you plan your roster with roster gaps, it is likely that more variance response management will be needed, meaning more casual use, more additional shifts worked by part-time staff and so on.

As established in the available hours' tab, planned leave should also be incorporated into the actual roster model to ensure staff receive their full planned leave entitlements. To support ward leaders to manage this leave, an additional table displaying the number of FTE, eight-hour shifts and hours per week is displayed at the bottom of the tab. These planned leave requirements should be built into the roster.

For small FTE roles, rostering the planned leave entitlement weekly may not be practical, such as releasing a DSN for 0.64 of a shift. For large FTEs such as RN's, the manager should ensure 30 shifts (or 244.5 hours if not using 8-hour shifts) per week are used for all the leave/training activities listed on the allocate staff screen (except for sick leave). This does assume the ward is fully recruited as unfilled positions will reduce your ability to roster base staffing and the level of planned leave indicated.

Planned leave, allocation required per week			
	FTE/week	Shifts/week	Hours/week
DSN	0.13	0.64	5.15
HCA	0.81	4.06	32.44
RN	6.12	30.61	244.88
Clerical	0.36	1.78	14.27
CNM/CMM	0.17	0.84	6.71
DSN/M	0.08	0.38	3.06
Rostered HPPD		5.02	
Calculated HPPD		6.02	
Recommended HPPD		5.58	

At the bottom of the Roster Profile tab (highlighted in green on the snip above), there is a summary of the rostered HPPD, calculated HPPD and Recommended HPPD. This allows you to check the impact of your

decision making. For example, where are you expecting the HPPD generated by the roster to increase, decrease or stay the same? If it is not as expected, why not? Is the data entry correct?

This tab can be exported to PDF for printing or copying and pasting into a report (see Step 15).

# Step 13 – Base FTE

Step 13 is the Base FTE tab, where the software calculates the total hours required for the base roster by factoring in the expected turnover and new graduates. The tab shows the remaining available hours for each role selected in the Set-up Tab. The roles appear in alphabetical order across the screen from left to right.

This tab is required because new roles generally have fewer available hours due to additional orientation and training than existing roles require. As the software calculates a single FTE figure for each role (RN, RM, HCA, etc.), the software needs to calculate how much additional FTE is required to ‘top-up’ the difference in hours available. This can be demonstrated in the detailed explanation of new grads in the next section

The hours available for each role are the total hours for a working year (2086 for 1.0 FTE), less planned and unplanned leave. This information comes from the Available Hours tab.

You may or may not want to include new graduates as turnover in the software. New Grad will depend on your contracting arrangements and recruitment plans, which is explored in-depth further into this section.

**FTE Study : FTE-Wd 29-2020-830**

	DSN	HCA	RN
Hours Available for Existing FTE	1,670.00	1,670.00	1,622.00
Hours Available for New Experienced FTE	2,086.00	1,702.00	1,574.00
Hours Available for New Graduate FTE			1,413.00
<b>Expected FTE Turnover</b>	<input type="text" value="0.00"/>	<input type="text" value="2.00"/>	<input type="text" value="3.00"/>
<b>Expected Number of New Grads</b>			<input type="text" value="2.00"/>
Existing * Budgeted FTE	1,336.00	8,350.00	39,219.96
Less Existing * Expected FTE Turnover	0.00	-3,340.00	-4,866.00
New Graduate * Expected Number of New Grads			2,826.00
New Experienced * Max(0, Expected FTE Turnover - Expected New Grads)	0.00	3,404.00	1,574.00
<b>Current Clinical Hours Available (w/ Expected Turnover &amp; Grads)</b>	<input type="text" value="1,336.00"/>	<input type="text" value="8,414.00"/>	<input type="text" value="38,753.96"/>
<b>Total Hours Available</b>	<input type="text" value="48,503.96"/>		
<b>Total Hours Required (Roster)</b>	<input type="text" value="61,568.00"/>		
<b>Variance in Hours</b>	<input type="text" value="-13,064.04"/>		
<b>Variance as FTE's</b>	<input type="text" value="4.36"/>	<input type="text" value="0.76"/>	<input type="text" value="0.19"/>
		<input type="text" value="7.09"/>	

Override FTE

Calculations

To populate this tab

Enter the:

### 1. Expected FTE turnover

This is the expected turnover as FTE for the upcoming 12 months. This figure must be calculated for each base role (e.g. RN, RM, EN, HCA and includes DSN/DSM if selected as a base role). This may need to be calculated as an average by role from the last three years. If there is no expected turnover for a role, enter '0'.

Turnover should include new graduates on fixed-term contracts that are offered permanent contracts only when there is an existing vacancy. For example, if you have a nursing hours deficit and plan to fill this deficit with new graduates, do not include the existing new graduates as turnover. The software will then treat any expected new graduate FTE as new or additional FTE.

### 2. Expected FTE of new graduates

This is the expected number of new graduates as FTE. This should be based on the agreed number of new graduates for the ward/unit planned for the upcoming financial year.

Once the turnover and expected new graduates are entered, the software calculates and displays the current available hours, adjusting for the expected turnover and new graduates. The software also displays the :

- Total hours available by adding together the current available hours for each role. For example in the screen shot the total hours = 1,336 + 8414 + 38753.96 = 48,503,96.
- Hours required by the recommended roster. For example, from the screenshot = 61,568.00 hours.
- Variance as hours i.e the difference between available and required. For example from the screenshot the variance = 48,503.96 – 61,568 = -13,064.04 hours.

### 3. Variance as FTE's

This section allows the software to allocate FTE against any remaining variance. For example, the variance between the current hours available and the hours required for the roster may be -13,064.04 hours. Based on the roster profile staffing requirements, the software enters the FTE under the base roles (e.g. RN, RM, EN, HCA). An override function for this automation exists, but it is strongly recommended the User does not use this function without discussing it with their CCDM Programme Consultant

Make sure you click **Save** at the bottom of the screen before navigating to the next tab.

## *Why do I need to include new graduates as turnover in the software on the Base FTE tab? A detailed explanation*

The software assumes any shortfall in hours will be filled by 'new experienced' staff (with the applicable, available hours) unless you enter more 'expected new graduates' on the Base FTE tab. This can play out in three ways

1. New graduates on fixed-term contracts of 12 months or less should be included as 'turnover' FTE. They will either be employed into a vacancy in the same ward/unit or move to another area. If they fill a vacancy or a shortfall, the software uses 'new experienced' available hours to calculate

the FTE required. In short, the graduate turnover is cancelled out by the new experienced replacement with the exception of the difference in available hours.

2. New graduates employed on a permanent contract from the ward budget should not be counted as turnover as they will have filled a vacancy for budgeted FTE at the beginning of their employment. Any shortfall in FTE will be calculated using the 'new experienced' available hours.
3. If you want to fill any recommended roster shortfall with new graduates, these should be entered as additional expected new graduates. Then, the software will calculate the FTE based on the available hours for new graduates.

It is essential to get the 'expected new graduate' and 'turnover' FTE correct. This is how the software determines which available hours to calculate the total FTE, i.e. available hours for new graduates versus available hours for new experienced staff. The difference in available hours can be significant and impacts the roster and total FTE. An example of how the software calculates the FTE is described below.

New graduates employed from different cost centres should be excluded from the FTE calculation but acknowledged as making up the roster profile as one or more RNs, RMs, or ENs.

The simplified example below demonstrates this being applied in practice. With an expected turnover of one staff member, the software assumes this staff member is a new experienced FTE.

	EN	RN
Hours Available for Existing FTE	2,086.00	1,706.00
Hours Available for New Experienced FTE	2,086.00	1,666.00
Hours Available for New Graduate FTE	2,086.00	1,646.00
Expected FTE Turnover	<input type="text" value="0.00"/>	<input type="text" value="1"/>
Expected Number of New Grads	<input type="text" value="0.00"/>	<input type="text" value="0.00"/>
Existing * Budgeted FTE	0.00	0.00
Less Existing * Expected FTE Turnover	0.00	-1,706.00
New Graduate * Expected Number of New Grads	0.00	0.00
New Experienced * Max(0, Expected FTE Turnover - Expected New Grads)	0.00	1,666.00
Current Clinical Hours Available (w/ Expected Turnover & Grads)	<b>0.00</b>	<b>-40.00</b>
Total Hours Available	<b>-40.00</b>	
Total Hours Required (Roster)	<b>0.00</b>	
Variance in Hours	<b>-40.00</b>	
Variance as FTE's	EN	RN
	<b>-40.00</b>	<b>0.00</b>

New experienced staff have 1,666 hours available, and this is 40 hours less than existing staff. The software adds these additional hours as a variance to FTE at the bottom. This is a negative figure as the software has not allocated these hours to a role type, although the default is RN if this is not allocated. Within version 5.0, the software does this automatically based on the roster profile. Any residual shortfall is allocated to the RN.

If the new staff member was a new graduate, the available hours are 1,646. So 60 hours fewer available hours than the new experienced FTE. The "Variance as FTE's" changes to reflect this, from -40 hours to -60 hours. This change can be seen in the clip below.

Essentially, the software indicates an additional 60 hours need to be added to 'top-up' the number of hours required to get the correct FTE and role mix (because the calculation is based on the existing FTE's available hours, which has 60 more hours available.)

	EN	RN
Hours Available for Existing FTE	2,086.00	1,706.00
Hours Available for New Experienced FTE	2,086.00	1,666.00
Hours Available for New Graduate FTE	2,086.00	1,646.00
Expected FTE Turnover	<input type="text" value="0.00"/>	<input type="text" value="1"/>
Expected Number of New Grads	<input type="text" value="0.00"/>	<input type="text" value="1"/>
Existing * Budgeted FTE	0.00	0.00
Less Existing * Expected FTE Turnover	0.00	-1,706.00
New Graduate * Expected Number of New Grads	0.00	1,646.00
New Experienced * Max(0, Expected FTE Turnover - Expected New Grads)	0.00	0.00
Current Clinical Hours Available (w/ Expected Turnover & Grads)	<input type="text" value="0.00"/>	<input type="text" value="-60.00"/>
Total Hours Available	<input type="text" value="-60.00"/>	
Total Hours Required (Roster)	<input type="text" value="0.00"/>	
Variance in Hours	<input type="text" value="-60.00"/>	
Variance as FTE's	EN	RN
	<input type="text" value="-60.00"/>	<input type="text" value="0.00"/>

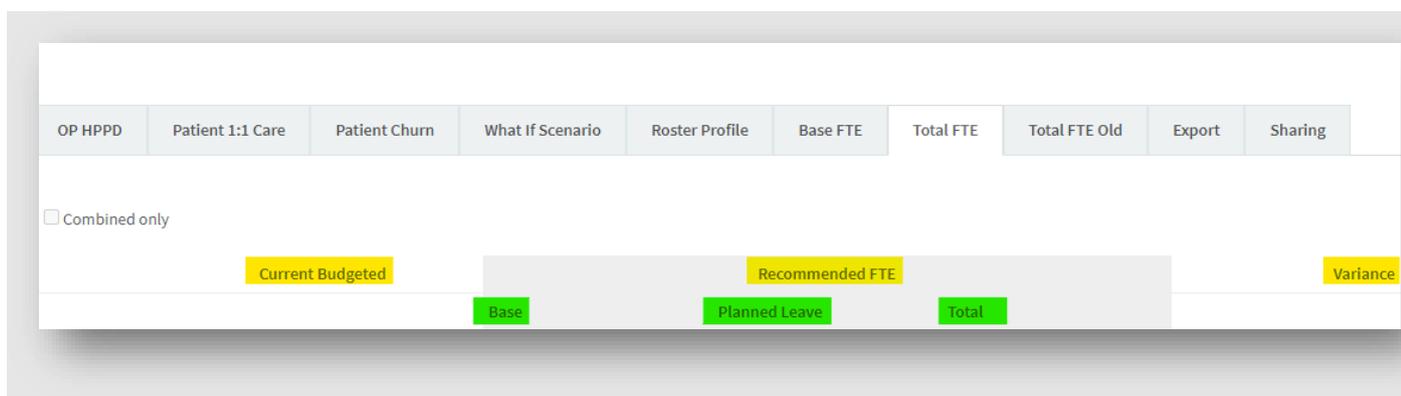
These additional hours add up; if one new grad and one experienced member of staff join a ward, the difference would be 100 hours or 12.5 shifts across the year.

## Step 14 – Total FTE

Step 14 calculates the total FTE required for this ward/unit. There are two Total FTE tabs in the software

1. **Total FTE** – This is the most commonly used option. This tab displays base and additional roles total the base and planned leave for each role, and combining unplanned leave to a separate combined budget line
2. **Total FTE Old** – This tab is the original layout, and a key point of difference being the unplanned leave remains aligned with specific roles.

Both Tabs display a variance to the current FTE (as it is recorded in the setup tab). If the Set-up tab FTE includes unplanned leave, the variance to the current budget must be viewed on the 'Total FTE Old' tab. If it does not include unplanned leave, the 'Total FTE' tab should be used for comparison.



The 'Total FTE' tab (above) displays base, additional and bureau FTE with a breakdown across the tab. This information is populated from:

1. **Current budgeted** - FTE as documented within the setup tab
2. **Recommended FTE** - This is subdivided to show
  - **Base** – This FTE figure the FTE required to staff the base and additional role rosters as per the roster profile tab
  - **Planned leave** – This column shows the amount of FTE required to provide all the planned leave entitlements (as per the available hours' tab).
  - **Total** - The total of the Base and Planned leave
3. **Variance** - The difference between the Current FTE and recommended Total FTE.

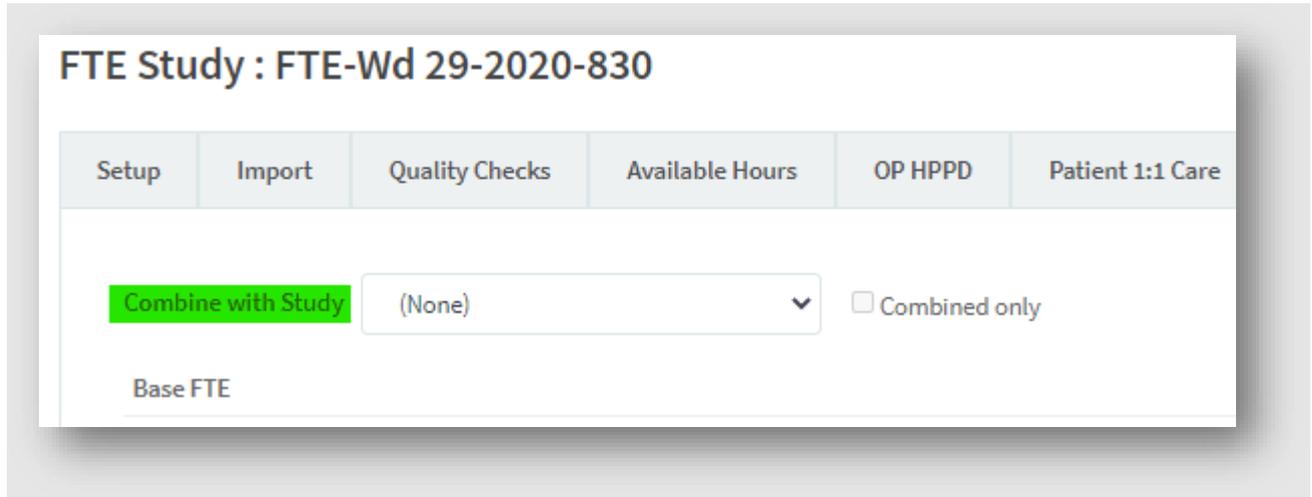
Sick/bereavement and hours required for patient 1:1 care are displayed separately under Bureau FTE. Sick/bereavement FTE is the sum of all FTE for unplanned leave for all staff types included in the study, and this FTE is not typically recruited at a ward level.

On the Total FTE Tab, check that your study figures are as you would expect. Investigate any figures that look incorrect/out of place by checking the budgeted FTE, available hours, recommended roster, turnover and new graduates for erroneous entries.

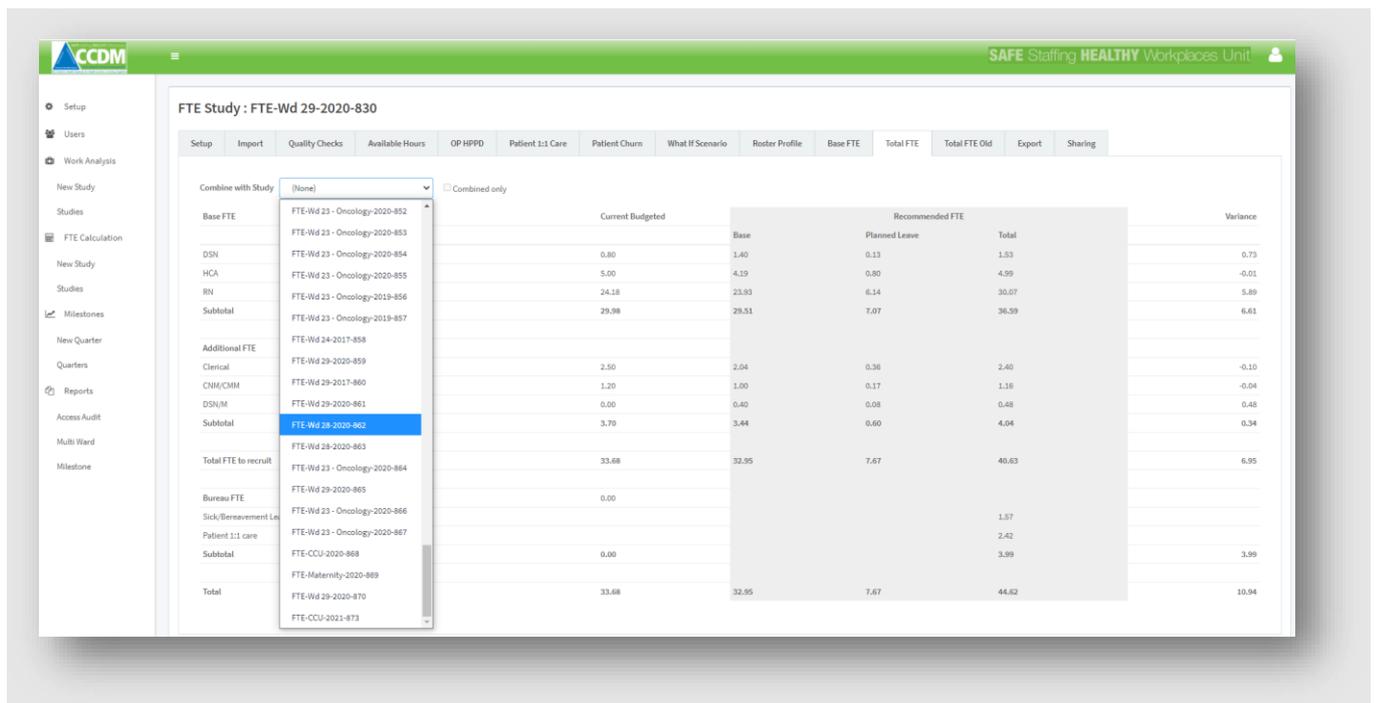
Ideally, the budgeted FTE for professional development should also be calculated separately from planned leave. This can be calculated from the Available Hours tab. That way the variance to budgeted FTE (for planned leave, unplanned leave, 1:1 care and professional development) can be monitored throughout the year.

### Combining two wards Total FTE results

In some situations, more than one ward is funded by the same costing centre. The wards may be geographically in the exact location or separate, but they are different wards within the TrendCare system, with each ward will require its own FTE study.



To combine the two wards under a single cost code, select the 'Combine with Study' dropdown box and choose the study you want to combine with this study. The Total FTE tab will now show the FTE for both wards and a combined total.



With the view below, transparency is high, and the reader can easily see the combined totals. However, although the transparency level is high, the page is hectic to look at.

	Wd 29-2020-830				Wd 28-2020-862				Combined						
	Current Budgeted	Recommended FTE		Variance	Current Budgeted	Recommended FTE		Variance	Current Budgeted	Recommended FTE		Variance			
Base FTE		Base	Planned Leave	Total		Base	Planned Leave	Total		Base	Planned Leave	Total			
DSN	0.80	1.40	0.13	1.53	0.73	1.20	1.40	0.00	1.40	0.20	2.00	2.80	0.13	2.93	0.83
HCA	5.00	4.19	0.80	4.99	-0.01	5.60	5.58	0.00	5.58	-0.02	10.60	9.77	0.80	10.57	-0.03
RN	24.18	23.93	6.14	30.07	5.89	17.30	15.36	0.00	15.36	-2.14	41.68	39.28	6.14	45.42	3.74
<b>Subtotal</b>	<b>29.98</b>	<b>29.51</b>	<b>7.07</b>	<b>36.59</b>	<b>6.61</b>	<b>24.30</b>	<b>22.34</b>	<b>0.00</b>	<b>22.34</b>	<b>-1.96</b>	<b>54.28</b>	<b>51.85</b>	<b>7.07</b>	<b>58.92</b>	<b>4.64</b>
<b>Additional FTE</b>															
Clinical	2.50	2.04	0.36	2.40	-0.10	2.70	0.65	0.00	0.65	-2.05	5.20	2.69	0.36	3.05	-2.15
CNM/CBM	1.20	1.00	0.17	1.16	-0.04						1.20	1.00	0.17	1.16	-0.04
DSN/M	0.00	0.40	0.08	0.48	0.48	1.20	0.40	0.00	0.40	-0.80	1.20	0.80	0.08	0.87	-0.33
HCA-non-clinical						1.20	0.52	0.00	0.52	-0.68	1.20	0.52	0.00	0.52	-0.68
<b>Subtotal</b>	<b>3.70</b>	<b>3.44</b>	<b>0.60</b>	<b>4.04</b>	<b>0.34</b>	<b>5.10</b>	<b>1.57</b>	<b>0.00</b>	<b>1.57</b>	<b>-3.53</b>	<b>8.80</b>	<b>5.01</b>	<b>0.60</b>	<b>5.61</b>	<b>-3.19</b>
<b>Total FTE to recruit</b>	<b>33.68</b>	<b>32.95</b>	<b>7.67</b>	<b>40.63</b>	<b>6.95</b>	<b>29.40</b>	<b>23.91</b>	<b>0.00</b>	<b>23.91</b>	<b>-5.49</b>	<b>63.08</b>	<b>56.86</b>	<b>7.67</b>	<b>64.54</b>	<b>1.46</b>
Bureau FTE	0.00														
Sick/Bereavement Leave				1.57				0.00						1.57	
Patient 1:1 care				2.42				0.00						2.42	
<b>Subtotal</b>	<b>0.00</b>			<b>3.99</b>	<b>3.99</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.99</b>	<b>3.99</b>	<b>3.99</b>
<b>Total</b>	<b>33.68</b>	<b>32.95</b>	<b>7.67</b>	<b>44.62</b>	<b>10.94</b>	<b>29.40</b>	<b>23.91</b>	<b>0.00</b>	<b>23.91</b>	<b>-5.49</b>	<b>63.08</b>	<b>56.86</b>	<b>7.67</b>	<b>68.53</b>	<b>5.45</b>

An option to resolve the hecticness of this page is to use the 'Combined only' option. This option changes the view, so only the combined totals are visible to the reader, these figures being the combined budget for both studies.

Base FTE	Current Budgeted	Recommended FTE		Variance
		Base	Planned Leave	Total
DSN	2.80	2.80	0.13	2.93
HCA	10.60	9.77	0.80	10.57
RN	41.68	39.28	6.14	45.42
<b>Subtotal</b>	<b>54.28</b>	<b>51.85</b>	<b>7.07</b>	<b>58.92</b>
<b>Additional FTE</b>				
Clinical	5.20	2.69	0.36	3.05
CNM/CBM	1.20	1.00	0.17	1.16
DSN/M	1.20	0.80	0.08	0.87
HCA-non-clinical	1.20	0.52	0.00	0.52
<b>Subtotal</b>	<b>8.80</b>	<b>5.01</b>	<b>0.60</b>	<b>5.61</b>
<b>Total FTE to recruit</b>	<b>63.08</b>	<b>56.86</b>	<b>7.67</b>	<b>64.54</b>
Bureau FTE				
Sick/Bereavement Leave				1.57
Patient 1:1 care				2.42
<b>Subtotal</b>	<b>0.00</b>			<b>3.99</b>
<b>Total</b>	<b>63.08</b>	<b>56.86</b>	<b>7.67</b>	<b>68.53</b>

**FTE Study : FTE-Wd 29-2020-830**

Setup Import Quality Checks Available Hours OP HPPD Patient 1:1 Care Patient Churn

Combine with Study: FTE-Wd 28-2020-862  **Combined only** View FTE-Wd 28-2020-862

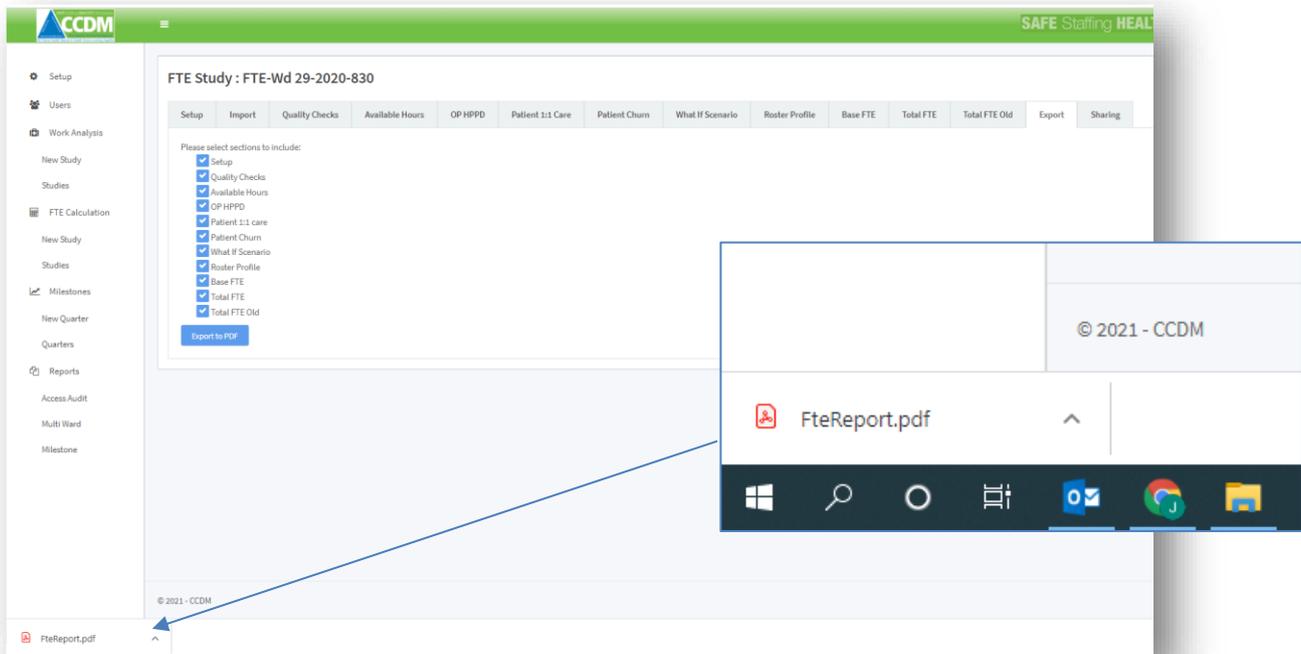
Combining two studies automatically gives everyone who has access to this study (830) access to the study (862) (when they then combined). However, people with access to study 862 will not see 830 unless

shared directly with them (it is one-way access permission). This permission ends if study 830 stops being combining with 862.

Further information about translating the FTE into practice is available from your Programme Consultant.

## Step 15 – Exporting to PDF

You can select the tabs you would like to export to a PDF report on the Export Tab. There are 11 reports in total available. All 11 tabs can be exported to PDF or any number in-between. To deselect one or more of the reports, click on the tick box . Then click **Export to PDF**. This may take a few minutes, depending on which reports and how many reports you have selected. The PDF document will be available at the bottom left of the screen.

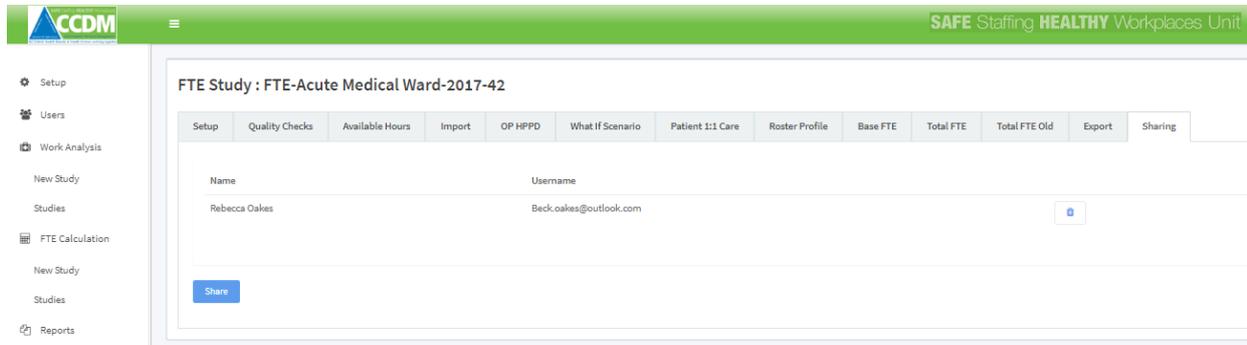


### User tip 17 – Generating an FTE calculation report

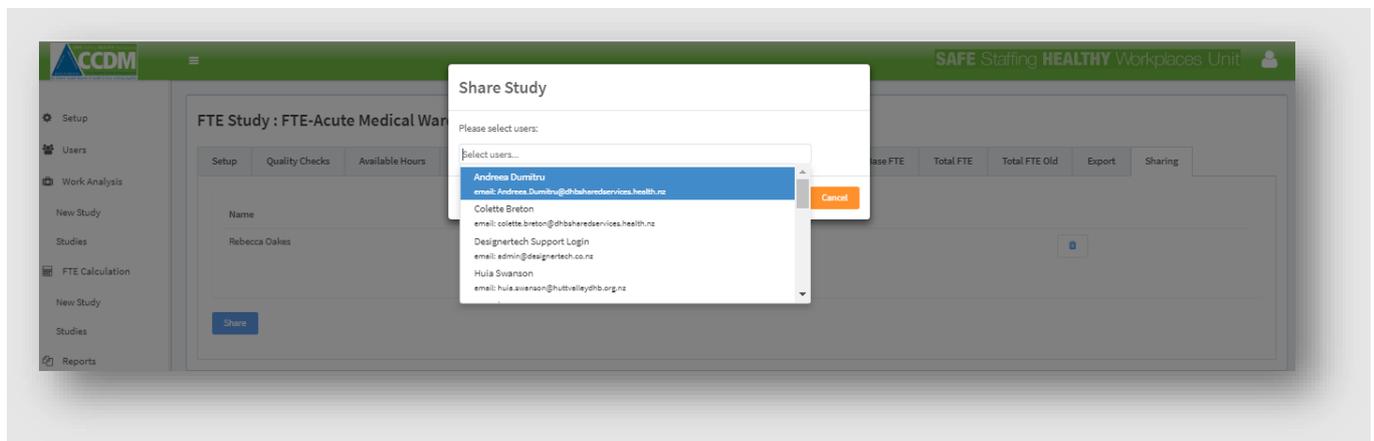
The Export function in the software is designed to minimise DHB time in producing reports. Each report has a header and footer with the DHB name, unique study ID and page x of y. They can be printed together or as individual documents. DHBs that are experienced and comfortable with the FTE calculation process may opt to use the software generated PDFs (or the Multi Ward report) as the final FTE calculation report. Alternatively, the snipping tool can also be used to take screen shots to insert into a word document if you prefer.

## Step 16 – Sharing a study

The sharing tab allows you to share your reports with other software users within your DHB and external to your DHB, e.g. SSHW Programme Consultant, Health Union and other DHB Site Administrators. The Sharing function allows view-only access (so no data entry or changes can be made). To share a study, navigate to the Sharing Tab. The Sharing Tab shows which studies have already been shared. To share a study with a new user click on the **Share** button.



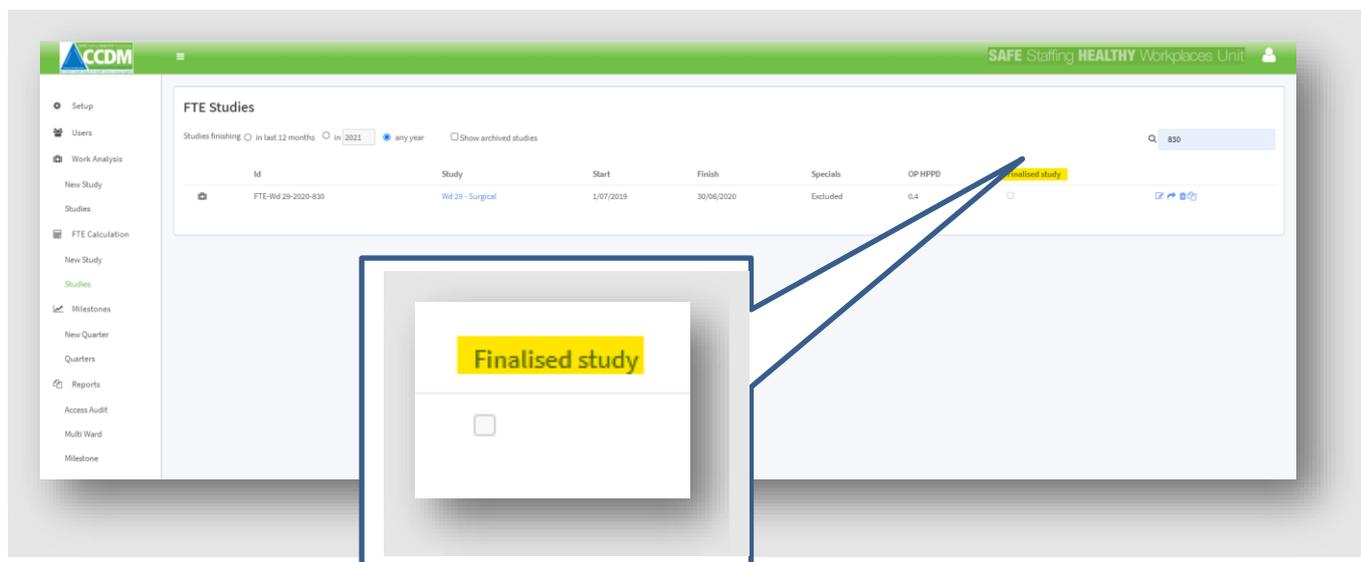
When you click on the **Share** button, a pop-up screen, 'Share Study' will appear. Click on 'select users', then click on the individual you want to share with from a drop-down list. (If you cannot find the person listed, check with the DHB or SSHW Administrator that they have been set up as a user). Click **OK**. The study will appear in the User **My Studies** list from the main menu on the far left of the screen.



If you change your mind about sharing the study with that person, you can either click on the cross at the end of their details or the **Cancel** button BEFORE clicking ok. Alternatively, click on the trash can icon  at the end of their name when they appear in the Sharing Tab. This will delete the shared study from that user's list of **My Studies**.

## Step 17 – Finalising a study

The DHB Site Administrator login is the only login able to select the 'Finalising study'. Once a study has been completed and approved by the CCDM council, it should be finalised on the FTE studies page. This final step will aid you in future years to identify the final agreed roster, steps taken and notes made when completing the study. This step will also allow the SSHW unit to identify 'completed' studies for potential use in national benchmarking and further agreed on analysis.



If the tick box does not allow the user to select it, one or more of the approvals within the study have not been completed. Approvals are required at the bottom of each of the following tabs:

- Setup
- Available Hours
- What If Scenario (Each shift must be finalised. The Deficit target % boxes 'greys out' finalised shifts)
- Roster Profile

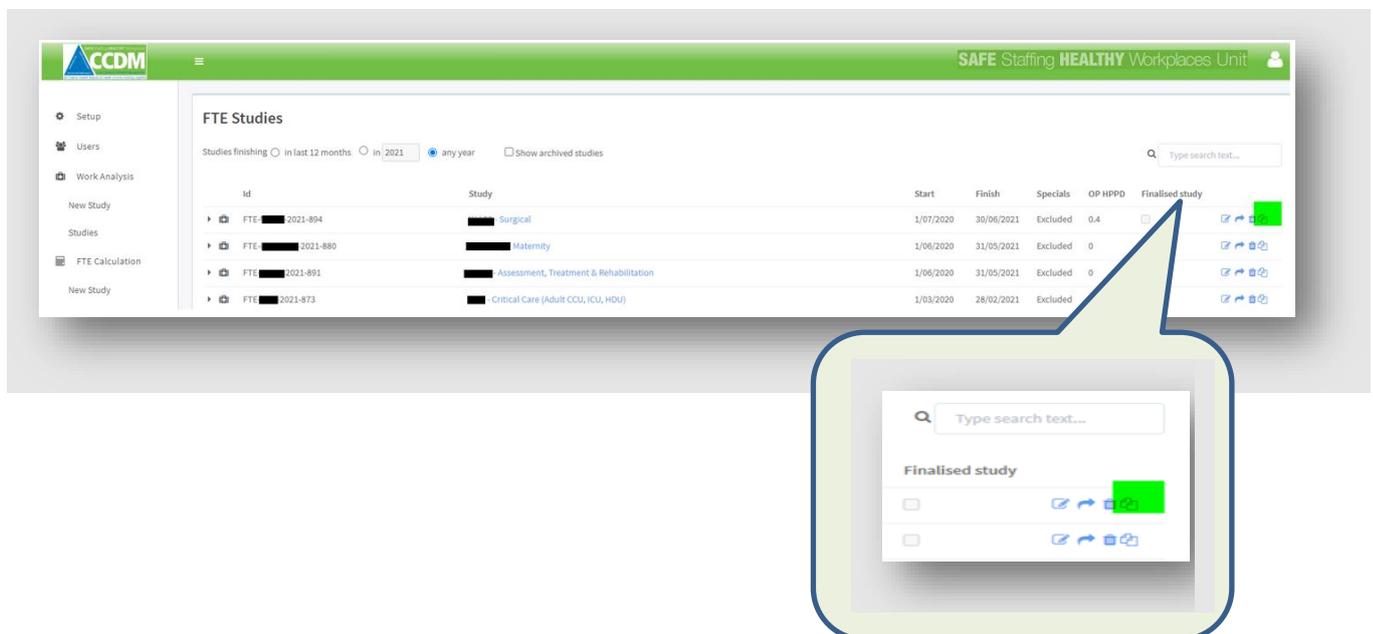
## Step 18 – Copying a study

The DHB Site Administrator login is the only login able to copy studies. The copy function allows the user to create an identical copy of a particular study, this new study will have its own identification number.

This function is to support users to:

- Perform seasonal variation check studies
- Compare studies including and excluding 1:1 care
- Reducing data entry when commencing a new round of FTE calculation studies
- Create multiple rosters for comparative reasons

To create a copy of a study, select the copy symbol (highlighted in green below) on the FTE calculations 'FTE Studies' screen.



When the copy function is selected, a new version of the study will open. This new version will be identical, **except** the 'Ward roster re-engineering report' will not be carried over and will need to be re-imported into the Import tab. This is because a different ward roster re-engineering report needs to be imported depending on if 1:1 care is being included or excluded. As there is no way for the software to identify if the imported csv contains 1:1 care, the user must re-import the correct version for their purposes to reduce the risk of errors.

### Copying a study and changing the date range for a new round of FTE studies

A copied study can be used as the basis of a new study, this practice has advantages and disadvantages, and the user should consider these before opting to use this function

Advantages include the time saved populating the setup page roster completely (the copied version will have the original studies set-up page roster copied over, and the available hours will not require significant changes (assuming the assumptions are unchanged).

The disadvantages of using a copied study for a new period is around the number of changes that will need to be made to the figures within the setup tab; all the changes made within the 'What if' rosters within the original study will all need to be transcribed into the new studies setup tab. This may be no less work than populating the study from fresh.

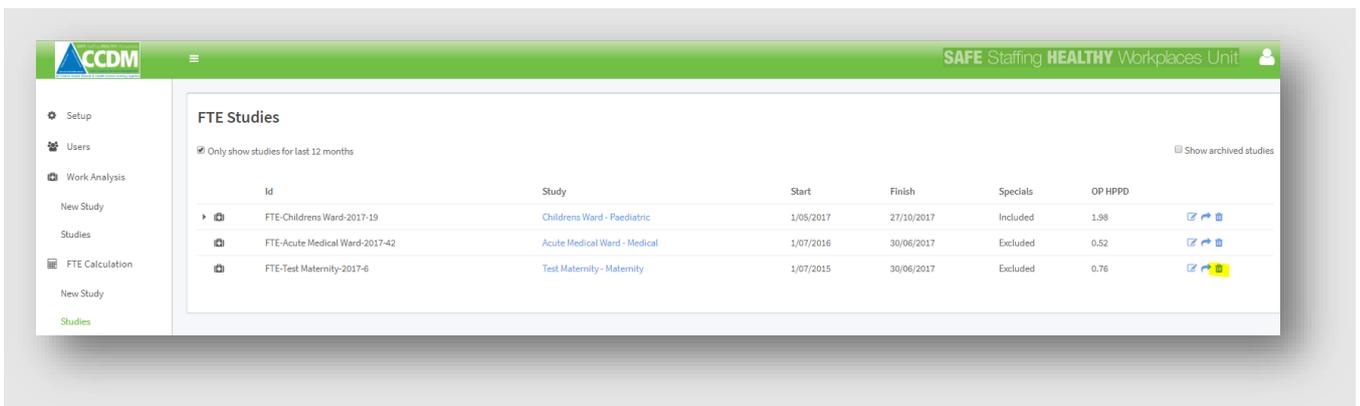
If using a copied study as the basis for a new period, the following step should be followed:

1. Create a copied study as outlined in the section above
2. Enter the import tab and delete all the imports for the previous study period
3. Re-enter the setup and update the Study Time Period to the new date range
4. Select save at the bottom of the setup tab. If any imports have not been removed the study will be unable to save
5. Update the setup tab fields as required
6. Update the available hours tab as required
7. Import csv files for the adjusted date range
8. Remove any unrequired comments (from the original study)
9. Click on 'recopy for each shift in the 'What if' tab; this will pull the updated staffing roster from the set-up tab.

## Step 19 – Archiving a study

The DHB Site Administrator can archive studies that are no longer wanted. The archive function allows studies to be 'deleted' without being lost from the system. The archive function will preserve any archived study in its original format regardless of any subsequent updates or changes made to the software. This includes any changes to TrendCare patient types or benchmarks. An archived study can be reinstated into the active studies list should this be needed.

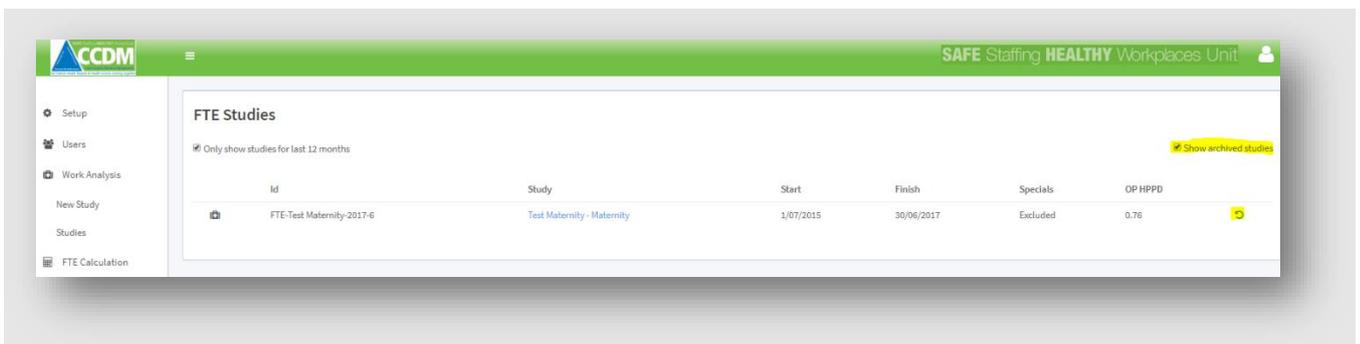
To archive a study, click on **Studies** under FTE Calculation on the main menu. From the studies list, click on the trash can icon  of the study you want to archive. The trash can icon is on the far right of the listed study names.



A message box will appear. Click OK to proceed with archiving or cancel to exit the message box. A confirmation message will appear when you click OK.

NOTE: any study that has been archived will no longer be visible to those users the study has been shared with. The DHB Administrator should notify the impacted internal and external users before archiving a study.

Once archived, the study is accessible via the 'show archived studies' check box to the top right of the current studies list. To reinstate a study, click on **Studies** under FTE Calculation on the main menu. Select the check box for 'show archived studies'. The software will display the list of archived studies. Click on the return arrow icon  to the right of the study you want to re-instate. A popup message will appear stating, 'FTE study re-instated. To return to the active work analysis study list, uncheck the box next to the 'show archived studies'.



## Step 20 – Running reports

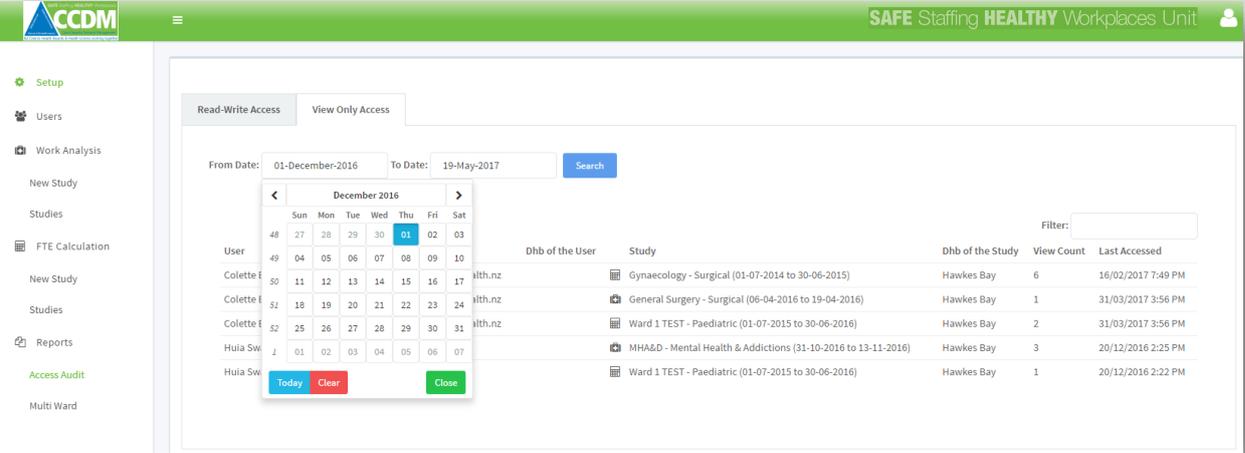
Reports on the main menu on the left of the screen are only visible to the DHB Site Administrator. There are three types of reports:

1. Access Audits
2. Multi Ward
3. Milestone

### Running an access audit report

The Access Audit provides a summary report of who has been accessing the software to edit or view DHB studies. Click on Access under Reports on the main menu. Select the Read-Write User or View Only Tabs. Select the date range you wish to check and then click on Search. The software will display (from left to right on the tab) the user email address, the DHB of the User, study name, DHB of the study, the view count, and the date last accessed from most recent at the top to least recent at the bottom of the list. Different icons indicate if the study was work analysis or FTE. Work analysis is identified by the first aid box icon , FTE calculation by the spreadsheet icon  and Milestones by the graph icon .

In the example below, the View-Only Access tab has been selected. The date range is 1 December 2016 to 10 May 2017. Five user emails are listed. Five studies from Hawkes Bay DHB are also listed. The view count ranges from once to six times. The most recently accessed study was on 16/02/2017 at 7:49 pm.



User	Dhb of the User	Study	Dhb of the Study	View Count	Last Accessed
Colette F	lith.nz	Gynaecology - Surgical (01-07-2014 to 30-06-2015)	Hawkes Bay	6	16/02/2017 7:49 PM
Colette F	lith.nz	General Surgery - Surgical (06-04-2016 to 19-04-2016)	Hawkes Bay	1	31/03/2017 3:56 PM
Colette F	lith.nz	Ward 1 TEST - Paediatric (01-07-2015 to 30-06-2016)	Hawkes Bay	2	31/03/2017 3:56 PM
Huia Swi		MH&D - Mental Health & Addictions (31-10-2016 to 13-11-2016)	Hawkes Bay	3	20/12/2016 2:25 PM
Huia Swi		Ward 1 TEST - Paediatric (01-07-2015 to 30-06-2016)	Hawkes Bay	1	20/12/2016 2:22 PM

### User tip 18 – Exporting the access audit for printing

At the top of the tab page next to the Search button icon there is an Export button (see screen shot above). Once the dates and/or filters have been applied click on the Export button. The document download will appear at the bottom far left of your desktop screen. It can be viewed and/or saved by clicking on the download.

The DHB Site Administrator and SSHW Administrator can export the Access audit to csv. This is so the list can be easily printed and reviewed by the CCDM Council. It is recommended that the Access Audit is reviewed quarterly to monitor activity and user access to the software.

If you are running and regularly reporting Access Audits to the CCDM Council, please note:

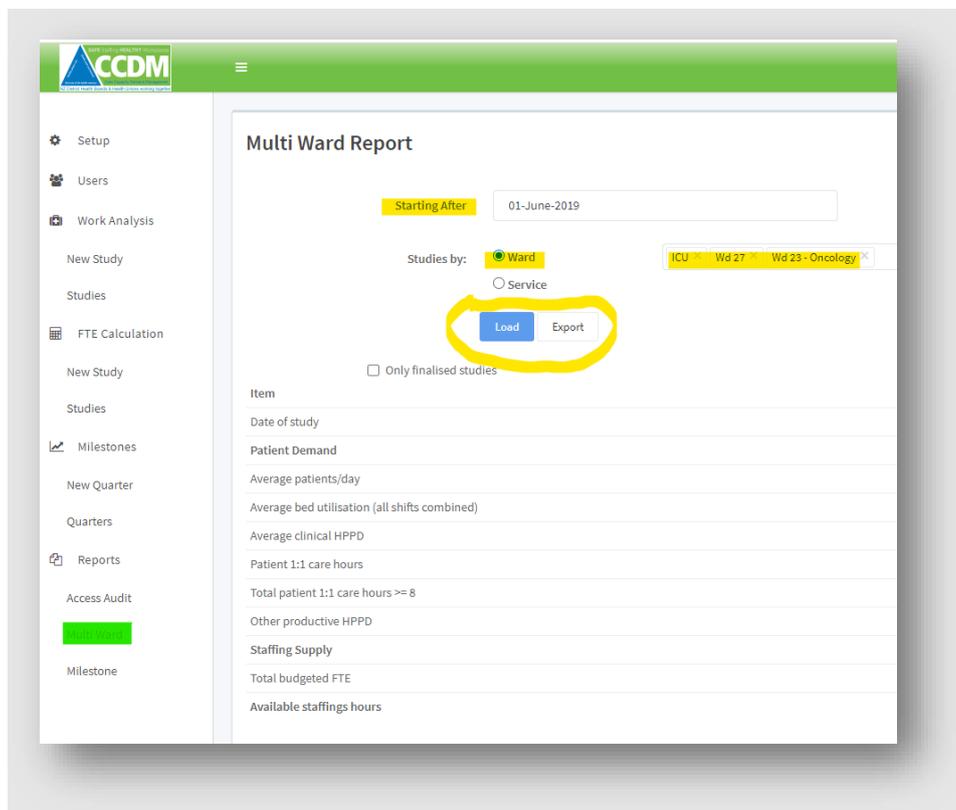
4. Where a user is deleted from the system (e.g. if someone leaves the organisation), their history will still appear on the logs.
5. Where a user's role is changed – e.g. move from a View-Only user to a Read-Write user – all their previous access history will then appear against the access level of their current role. So software access that was under view only might now be listed under the read-write tab because now they have read-write access. This is not likely to occur, or only rarely.
6. Running the multi ward report does not show up on the access logs.

### Running a multi ward report

The multi ward report can be run by the DHB Site Administrator only. It can easily be converted to a csv file for sending to other users. The multi ward report collates all the key data inputs and outputs in a table layout for multiple wards simultaneously. The report includes the following:

1. Patient demand – average patients per day, average bed utilisation, average clinical HPPD, 1:1 care hours and other productive HPPD (1:1 care hours will not display unless the Ward Patient 1:1 Care report has been imported into the software).
2. Staffing supply – total FTE and FTE by role
3. Available staffing hours – remaining available hours once all entitlements etc. have been removed, by role and level of experience

To run a multi ward report, click on 'multi ward' from the main menu on the left of the screen. Choose a date 'starting after', check the button for 'ward' or 'service', then click on 'select ward' or 'select service'. This will bring up a list of wards or services to choose from. Then click **Load** or Export. If you click **Load**, the information will display on the screen. This may be difficult to read if you have selected many wards. If you click Export, the data will be exported to a csv file and can then be formatted and saved in Excel for inclusion in reports or sending to other users etc.



The benefits of the multi ward report include:

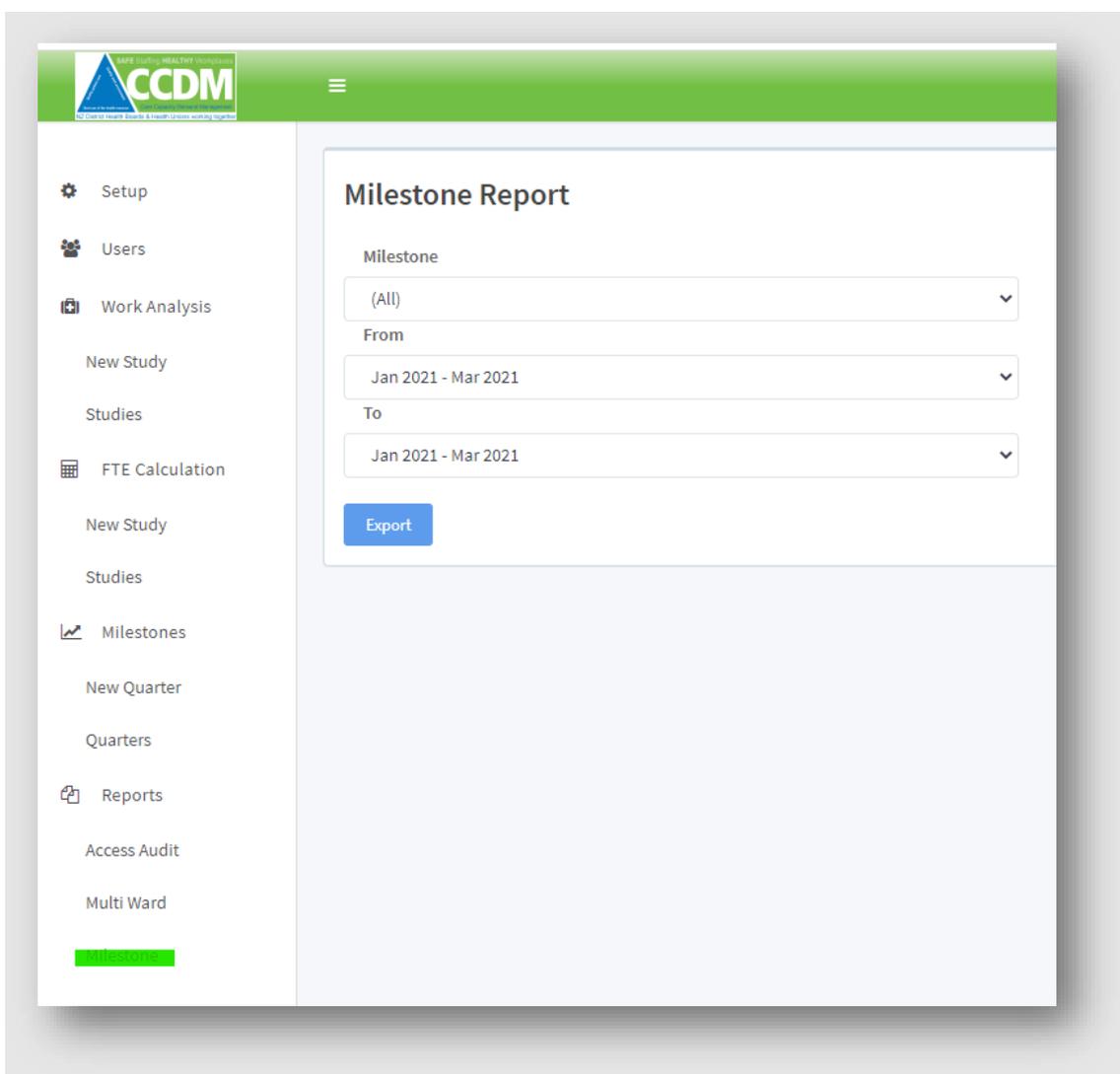
- A combined summary of several wards, a directorate, or the hospital, in a single view
- Opportunity for internal benchmarking between similar wards/units or services, e.g. other productive HPPD
- A layout that facilitates the identification of anomalies, e.g. data entry errors or missing data

The CCDM FTE calculation Working Group should use the report (for decision-making and authorising the data inputs) and in FTE calculation reports for the CCDM Council.

### *Running a milestone report*

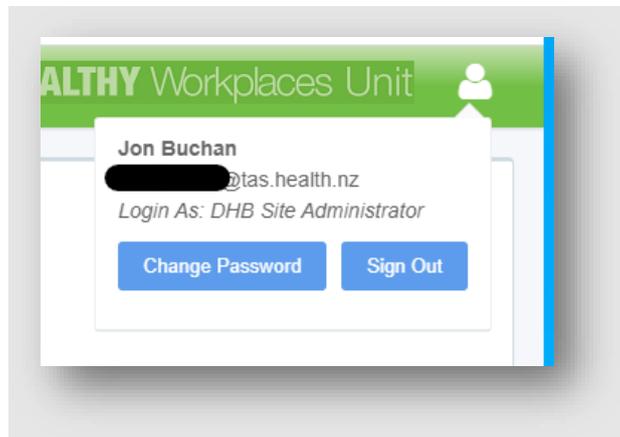
The DHB Site Coordinator can run the milestone report. This report collates all the information used by the DHB to populate the quarterly milestone reporting producing a csv export showing all the data and comments entered into the software.

Options allow the user to select a single or all the milestones and select a date range to pull reports from any set period of quarters.

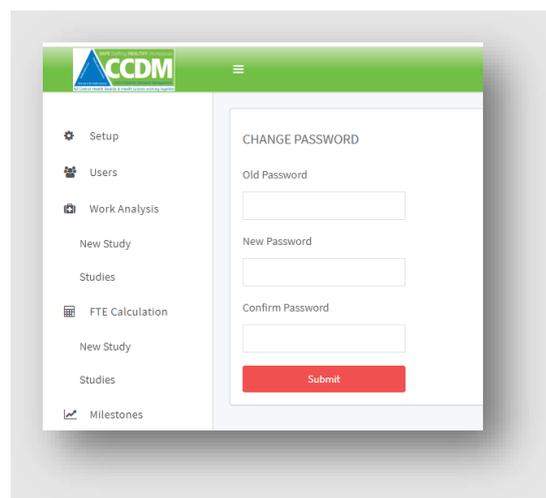


## Step 21 – Logging out and passwords

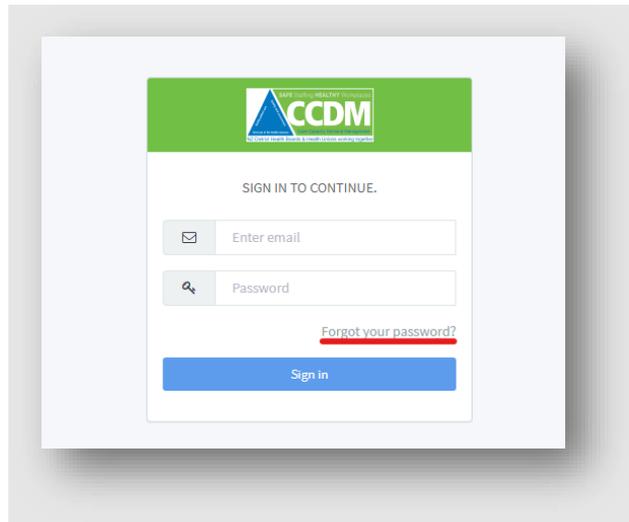
To log out, click on the person icon  at the top-right of your screen, click the **Sign Out** button.



To change your password, click on the **Change Password** button and complete the popup change password tab.



If you have forgotten your password, select the 'Forgot your password' option on the initial login screen for the opportunity to reset the password.



## Frequently asked questions

1. *An error message 'This page cannot be displayed' appears when I try to access the URL address for the software website.*

This may be a DHB firewall issue related to accessing a web address that ends with [health.nz](http://health.nz). Please contact your IT department to investigate the issue.

2. *I cannot enter any numbers into the data fields (or see the up-down arrows).*

This may be one of two problems:

- Your screen resolution is not set for compatible viewing of the software. Try pressing [Ctrl] + [Shift] + [+] or [Ctrl] + [-] keys together. This will increase or decrease the screen resolution. If this does not resolve the issue, your IT department may need to investigate.
- Alternatively, you are not using a compatible web browser. The web browser must be Internet Explorer 11, Google Chrome, or Firefox for the software to function correctly.

3. *The software is not saving data entries or changes I have made.*

You may not be using a compatible web browser. The web browser must be Internet Explorer 11, Google Chrome, or Firefox for the software to function correctly. This can also be caused by a slow DHB server or internet connection. You can try logging out and back in or contact your service provider if the problem continues. The data fields you are using must have a number, i.e. '0' or greater.

4. *The quality checks will not save.*

All the percentage values for the quality checks need to be entered before the save button will work.

5. *An error message appears when I try to import a TrendCare file.*

This may be one of three problems:

- Firstly, the dates of the imported file may be incorrect.
- Secondly, the TC code entered in the Setup tab does not match the TC code in the csv file. To check the TC code in the csv file, for example, in the Ward Shift Variance Report. Right-click on the csv file name from your Windows Explorer, open the csv with Notepad. The TC code should be the first number in this report. Remember, you may need leading zeroes in the software (see Step 7 - Import).
- Thirdly, the csv file may have lost its comma separating values (often because the csv file was opened using Excel at some stage). To check the integrity of the csv file, navigate to the saved file using Windows Explorer. Right-click on the csv and open with Notepad. Check that commas appear before and after each data field. If commas are missing, try resaving the file from TrendCare. Once you have checked dates, TC code and csv file integrity, re-try importing the file into the software.

6. *The recommended roster calculated by the software looks higher than the total required hours on the What If Scenario charts.*

This could be caused by two things:

- The software will not calculate anything lower than the minimum staffing that has been set on the Set-up Tab.
- The 1:1 care hours may have been included in the Roster Re-engineering Report that has been imported. Check that the inclusion/exclusion of 1:1 care hours in the Roster Re-engineering Report matches the inclusion/exclusion of 1:1 care hours on the Set-up Tab.

*7. We have two types of bureau staff – a resource pool on permanent contracts and a bureau on a casual contract. They have different available hours; which hours do I enter into the software?*

Deciding which available hours to enter for the bureau in the software depends on a number of factors. The available hours for the bureau in the software is used to calculate the FTE required for patient 1:1 care. So if much of your 1:1 care for this ward is for patient watches covered by HCAs on casual contracts, then you may want to consider using the available hours for the bureau on casual contracts. If, on the other hand, your patient 1:1 care for this ward is RN specialising covered by resource pool nurses on permanent contracts, then the resource pool available hours may be more appropriate. Alternatively, a weighted average or just an average of the two available hours could be used.

Less available hours means more FTE and vice versa. So this decision needs to be made by the CCDM FTE Working Group. You also need to determine if this same figure will be used for all wards undertaking FTE calculations or the available hours determined on a ward by ward basis.

*8. If the software calculates 1:1 care using bureau nurse available hours, what is used to cover sick leave?*

Sick leave is accounted for on the Available Hours tab. This means that the hours taken as sick leave are calculated as FTE using the available hours for that role. For example, if the sick leave for an existing RN is 72 hours per nurse, the total RN FTE is 18.55 and the existing nurse available hours is 1658, then the sick leave will be calculated as 0.80 FTE ( $72 \times 18.55 / 1658$ ). This is displayed separately on the Total FTE tab.

*9. Our new graduates are on 13 months fixed terms contracts – do I enter them as turnover?*

Yes. If a new graduate has a fixed-term contract and is required to apply for a permanent vacant position at the end of their NETP year, then enter them as 'expected FTE turnover' in the software, e.g. 0.8FTE. This is because the current new graduate is taking up a vacant position and leaving a 'gap' for an expected new graduate to take.

However, you can choose not to enter the current new graduates (on fixed-term contracts) as 'expected FTE turnover'. The software will simply treat any expected new graduate FTE as 'new' FTE, i.e. additional to your current budgeted FTE. If you have an FTE shortfall to budget and a nursing strategy to increase the number of new graduates, this may be entirely appropriate. The CCDM FTE Working Group needs to make this decision.

*10. There is no Total FTE displayed on the Total FTE Tab.*

For the total FTE to calculate on the Total FTE tab, you **must** enter 'available hours' for Clinical Nurse/Midwife Manager, Additional Designated Senior Nurse/Midwife roles and Clinic FTE. Available hours for these roles are entered in the Available Hours Tab. If you do not require any one of these roles, leave the roster fields (on the Setup Tab) blank. They will then appear in the Total FTE Tab as 0.00 FTE. Alternatively, do not include them as a study role on the Setup tab; that way, they will not appear on any subsequent tabs.

### *11. What day is the night duty on?*

The night duty in the software is set up in the same way as it is in TrendCare. For example, Monday night starts on Monday and finishes on Tuesday morning.

### *12. I cannot delete a study*

A study cannot be deleted from the system. It can be archived, which means it no longer appears in the study list and is not visible to any users. Refer to Step 16 - Archiving a study.

### *13. A study has gone missing*

This may be a study you are expecting to see but is no longer listed:

- when you click on Studies under Work analysis on the main menu
- under your My Studies list

If you are the DHB site Administrator, check the box next to 'show archived studies'. Scan the list for the missing study.

If you are any other user, check with the DHB Site Administrator if the study has been archived. Ask for the study to be re-instated as needed.

### *14. I cannot see any existing studies when I click on Studies on the main menu*

This may be one of three problems

- You are not using a compatible web browser. The web browser must be Internet Explorer 11, Google Chrome, or Firefox in order for the software to function correctly.
- The 'Show archived studies' check box (on the far right of the tab) is ticked. Uncheck the box, and the current studies will appear.
- If there are no studies listed under My Studies, check that the study has been shared with you. Also, check with the DHB Site Administrator that the study has not been archived.

## Appendix 1 – Available staffing hours

This section describes how to calculate how many hours will be available for staff to perform their work during a year.

A nurse, midwife or HCA employed at 1.0 FTE is paid for 2086 hours per annum. The calculation is 8 hours per day x 5 days a week x 52.14 weeks per year = 2086 hours per year. However, a nurse, midwife, or HCA cannot perform their work for 2086 hours per annum. The hours available to perform their work will be total hours for a working year (2086) less all time that person cannot be available for work –annual leave, study leave, sick leave etc. This section covers how to select values for the different types of staff and ward/unit contexts.

The following staff types will be covered here (all 1.0 FTE):

- Existing Nurse or Midwife
- Existing HCA
- New Nurse or midwife (Experienced)
- New HCA (Experienced)
- New Graduate Nurse or Midwife
- Bureau Nurse or Midwife
- Clinical Nurse or Midwife Manager

The figures calculated in this process should be entered into the software. If you do not have your own data, the default values set by the SSHW Unit can be used instead.

### *The use of Headcounts vs FTE when completing calculations*

Each calculation will require the use of either a headcount or budgeted FTE to ensure the correct additional hours are entered into the available hours' tab. The recommended metric to use will be indicated by having [Head count] or [FTE] alongside the title to show the correct metric for the recommended calculation.

Headcounts are used when calculating entitlements that each staff member is entitled to, such as CPR training. For example, if a ward had 30 staff who need to complete this one-day training, it would require 30 X 8hrs or 240hrs of education. However, if the ward has a budget of 20 FTE, each FTE would require 12hrs of education (240hrs / 20 FTE) to allow each of the 30 staff to attend.

FTE based calculations are used when the figure being entered is an average across the workforce. In these situations, the number of staff is irrelevant, i.e. the average sick days take for the ward per FTE; if the ward had 1,440hrs of sickness in a year, this would equate to 72hrs per FTE (1,440 / 20FTE). So in this situation, the amount of staff does not impact the calculation, but the average amount per FTE does.

### *Weighted Averages*

Weighted averages are used when a role type may have several different variables making it hard to calculate the correct value to add to the software. The definition of a weighted average is “the average of a set of numbers, each with different associated weights or values.” The weighted average gives a more accurate value for calculating annual leave where the continuous length of service varies between staff employed. Likewise, staff professional development varies according to their PDRP status. For example, there are 50 FTE in the ward of this 60% of staff have greater than five

years of continuous service and 40% less than five years. The calculation would be  $(50 \times 60\% \times 200) + (50 \times 40\% \times 160)/50 = (6000) + (3200)/50 =$  a weighted average of 184 hours to be entered into the software.

**Shift length-weighted Average for Public Holidays where there is a combination of 8 or 12- hour shifts in operation. The same equation can be applied if 10-hour shifts are worked.**

**Steps:**

1. Determine the total FTE working 12-hour shifts and then the total FTE for 8-hour shifts
2. 12-hour shifts would accrue 144 hours and 8-hour shifts 96 hours. (Inclusive of Matariki)
3. Example: Unit has a total of 50 FTE of these 30 FTE work 12-hour shifts and 20 FTE 8-hour shifts. The calculation would be  $(30 \times 144) + (20 \times 96)/50$

$$= (4320) + (1920)/50$$

$$= 6240/50$$

Weighted Average = 124.8 hours to be applied.

### *Calculating annual leave hours* [FTE]

The District Health Boards Nursing and Midwifery Multi-Employer Collective Agreement (2018-2020), hereafter referred to as the MECA, states the following:

13.1 Employees, other than casuals, shall be entitled to 4 weeks annual leave, taken and paid in accordance with the Holidays Act 2003 and subject to the other provisions of this clause, except that on completion of five years recognised current continuous service the employee shall be entitled to 5 weeks annual leave. For the purposes of this clause, "current continuous service" shall be as defined in clause 5.

'Current continuous service' defined in clause 5 is as follows:

"Service" means the current continuous service with the employer and its predecessors (Hospital and Health Services, Crown Health Enterprises, Regional Health Authorities, Health Funding Authority, Area Health Boards and Hospital Boards), except where otherwise defined in the applicable clause. As of the commencement of the previous MECA07 service will transfer between DHBs and service shall not be deemed to be broken by an absence of less than three months. However, where the employee remains actively engaged on nursing or midwifery related work or study whilst absent, the period of three months shall extend to twelve months. This period of absence does not count as service for the purpose of attaining a service related entitlement.

For non NZNO workforces, please refer to the relevant workforce MECA.

**Existing nurses, midwives, and HCAs [FTE]** will likely have a mixture of 4 weeks entitlement (160 hours) and 5 weeks entitlement (200 hours) per year. In this case, it is recommended that a weighted average entitlement is used. Do this separately for nurses and HCAs.

Example 1: 70% of Existing Nurses have 5 weeks entitlement, and 30% have 4 weeks entitlement. The weighted average calculation would be as follows:

$$(70\% \times 200) + (30\% \times 160) = 188 \text{ hours per year.}$$

Example 2: 90% of Existing HCAs have 5 weeks entitlement, and 10% have 4 weeks entitlement:

$(90\% \times 200) + (10\% \times 160) = 196$  hours per year.

**New nurses, midwives and HCAs** are also likely to have a mixture of 4 and 5 weeks entitlement. Similarly, it is recommended that a weighted average entitlement is used. This should be a weighted average entitlement based on the current continuous service of new hires to the organisation.

Example 1. 50% of New Nurses have 5 weeks, 50% of New Nurses have 4 weeks entitlement.  $(50\% \times 200) + (50\% \times 160) = 180$  hours per year.

Example 2. 25% of New HCAs have 5 weeks, 75% have 4 weeks entitlement.

$(25\% \times 200) + (75\% \times 160) = 170$  hours per year.

**New graduate nurses and midwives** will only be entitled to 4 weeks of annual leave unless there are some exceptional circumstances.

**Bureau nurses or midwives** entitlement will depend on the contractual arrangement they have with the individual DHB.

The **clinical midwife or nurse manager's** entitlement only relates to them, so 4 or 5 weeks depending on the individual's level of current continuous service.

### SSHW Unit default annual hours

Staff type	Annual Leave hours per year	
	Five years or more experience	Up to 0 – 5 years' experience
Existing Nurse or midwife	200	160
Existing HCA	200	160
New Nurse or midwife	180	160
New HCA	180	160
New Graduate Nurse or Midwife	160	160
Bureau staff	0	0
Clinical Nurse or Midwifery Manager	200	160

In summary, the SSHW unit recommends users choose one of the following options:

1. The average weighted entitlement per FTE (by role) from the previous year or years
2. Applying hours as per the SSHW recommended default table

Apply weighted averages for each role based on the different shift length entitlements

## Calculating shift leave [Head count]

The MECA states the following:

### 13.2 Shift Employees

Employees who work rotating shift patterns or those who work qualifying shifts shall be entitled, on completion of 12 months employment on shift work, to up to an additional 5 days annual leave, based on the number of qualifying shifts worked. The entitlement will be calculated on the annual leave anniversary date.

Qualifying shifts are defined as a shift which involves at least 2 hours work performed outside the hours of 8.00am – 5.00pm, excluding overtime.

Number of qualifying shifts per annum	Number of days additional leave pa
121 or more	5 days
96 – 120	4 days
71 – 95	3 days
46 – 70	2 days
21 – 45	1 days

To calculate the shift leave hours per year for staff, it is recommended that you use the average entitlement per FTE from the previous year or years. If this average is quite different between nurses and HCAs (e.g. HCAs might work less 'qualifying shifts' and therefore have a lower average), it should be calculated separately for each staff group.

This method can be applied to the following staff types: Existing Nurse, New Nurse, Existing HCA, and New HCA. This may also include Bureau Nurses if your DHB's contractual arrangement with them means they accrue shift leave. Clinical Nurse Managers (CNM) often work between the hours of 0800 and 1700. If this is the agreement with your CNM, then they will not qualify for additional shift leave. If your CNM works outside the hours of 0800 to 1700 (not including overtime), then you will need to use the average entitlement from the previous year/s in the same way as for the other staff types.

### SSHW Unit default shift leave hours

Staff type	Shift leave hours per year
Existing Nurse or midwife	40
Existing HCA	40
New Nurse or midwife	40
New HCA	40
New Graduate Nurse or Midwife	40
Bureau staff	0
Clinical Nurse or Midwifery Manager	0

Assumptions:

- Bureau Nurse's contractual arrangement allows them to receive extra leave for shift work
- Clinical Nurse Manager's regular hours are between 0800 and 1700

In summary, the SSHW unit recommends users choose one of the following options:

1. The average entitlement per FTE (by role) from the previous year or years
2. Applying 40 hours shift leave to roles as per the agreed MECA entitlement for a full-time equivalent.
3. Apply weighted averages for each role based on the different shift length entitlements

### *Calculating public holidays* [Head count]

As of 2022, New Zealand observes 12 public holidays per year. These are listed on the New Zealand governments website <https://www.govt.nz/browse/work/public-holidays-and-work/public-holidays-and-anniversary-dates/>. In addition to the list below, each region also celebrates an additional regional anniversary day

## **National public holidays 2022**

- New Year's Day: Saturday 1 January or Monday 3 January
- Day after New Year's Day: Sunday 2 January or Tuesday 4 January
- Waitangi Day: Sunday 6 February or Monday 7 February
- Good Friday: Friday 15 April
- Easter Monday: Monday 18 April
- Anzac Day: Monday 25 April
- Queen's Birthday: Monday 6 June
- Matariki: Friday 24 June
- Labour Day: Monday 24 October
- Christmas Day: Sunday 25 December or Tuesday 27 December
- Boxing Day: Monday 26 December

Staff who work a public holiday are paid at double time for the proportion of the shift that falls on a public holiday and receives an additional day's holiday. There are additional clauses in the MECA around pay rates on public holidays when they fall at the weekend. A staff member is paid when they do not work a public holiday depending on whether that day would 'otherwise be a working day'. The definition of what would otherwise be a working day in the Holidays Act (2003) is below:

### **12 Determination of what would otherwise be working day**

(1) This section applies for the purpose of determining an employee's entitlements to a public holiday, an alternative holiday, to sick leave, or to bereavement leave.

(2) If it is not clear whether a day would otherwise be a working day for the employee, the employer and employee must take into account the factors listed in subsection (3), with a view to reaching agreement on the matter.

(3) The factors are—

(a) the employee's employment agreement:

(b) the employee's work patterns:

(c) any other relevant factors, including—

(i) whether the employee works for the employer only when work is available:

(ii) the employer's rosters or other similar systems:

(iii) the reasonable expectations of the employer and the employee that the employee would work on the day concerned.

(d) whether, but for the day being a public holiday, an alternative holiday, or a day on which the employee was on sick leave or bereavement leave, the employee would have worked on the day concerned.

(3A) If the public holiday, alternative holiday, or day on which the employee was on sick leave or bereavement leave falls during a closedown period, the factors listed in subsection (3) must be taken into account as if the closedown period were not in effect.

(4) For the purposes of public holidays, if an employee would otherwise work any amount of time on a public holiday, that day must be treated as a day that would otherwise be a working day for the employee.

Section 12(3)(d): added, on 1 April 2011, by [section 7\(1\)](#) of the Holidays Amendment Act 2010 (2010 No 126).

Section 12(3A): inserted, on 27 November 2010, by [section 7\(2\)](#) of the Holidays Amendment Act 2010 (2010 No 126).

For nurses that work rostered and rotating shifts, it is likely that any day may 'otherwise have been a working day' for them. It is recommended that these staff receive the full allowance of 12 days (96 hours).

If the ward/organisation employs nurses or HCAs with fixed days, it is possible that they may not be entitled to some of the public holidays. The number of days they will be entitled to can be calculated based on the dates that the FTE Calculation will be used for (e.g. your next budget), as the days of the week of several holidays shift year to year. Their entitlements can be applied to the individual (e.g. in the case of Clinical Nurse Manager) or as part of a weighted average for that staff group.

Example 1: 90% of Existing Nurses will get all public holidays based on working rostered and rotating shifts, 10% work fixed days and will receive only 10 of 12 public holidays (80 hours) during the dates the next budget is being calculated for. The weighted average calculation would be as follows:

$(90\% \times 96) + (10\% \times 80) = 87.2$  hours per year.

#### SSWH Unit default public holidays hours

Staff type	Public holiday hours per year
Existing Nurse/Midwife	96
Existing HCA	96
New Nurse/Midwife	96
New HCA	96
New Graduate/Midwife	96
Bureau staff	0
Clinical Nurse/Midwife Manager	0

Assumptions:

- All staff types work rostered and rotating shifts

- All holidays in the budget period are during Monday to Friday (or are Monday-ised) – and Clinical Nurse Manager works Monday to Friday
- All part-time staff working rostered and rotating shifts will meet the criteria set out in the Holiday act (2003) and be entitled to claim the full public holiday entitlement
- Clinical Midwife/Nurse Managers are not back-filled

In summary, the SSHW unit recommends users choose one of the following options:

1. Apply weighted averages for each role based on the actual (by headcount). This is likely to produce a figure above 96 hours due to the impact of part-time staff receiving the full entitlement. Staff will be paid at their usual rate if they have a rostered day off on the public holiday if they worked the previous 40% of days the public holiday falls upon. This is additional to their contracted hours of employment
2. The average entitlement per FTE (by role) from the previous year or years
3. Applying 96 hours Public holiday entitlement to roles as per the recommended MECA agreement

### Calculating long service leave hours [FTE]

The MECA states:

#### **19.0 Long Service Leave**

- 19.1 An employee shall be entitled to long service leave of one week upon completion of a five year period of current continuous service. Current continuous service shall be deemed to include prior continuous service with another DHB. Such entitlement may be accrued. However any service period for which a period of long service leave has already been taken or paid out shall not count towards this entitlement.

Therefore long service leave accrues at the rate of one day per year, which can be taken only after five years of current continuous service.

To calculate the long service leave hours per year for staff, it is recommended that you use the average taken per FTE from the previous year or years. If this average is quite different between nurses and HCAs, each staff group should be calculated separately.

If staff indicate their intention to take some of their long service leave in the coming year, you can use this to further inform your calculation.

#### SSHW Unit default long service leave hours

Staff type	Long service hours per year
Existing Nurse or midwife	8
Existing HCA	8
New Nurse or midwife	8
New HCA	8
New Graduate Nurse or Midwife	8
Bureau staff	0
Clinical Nurse/Midwifery Manager	8

Assumptions:

- Uses accrual rate of long service leave, i.e. one day per year, for all staff types

In summary, the SSHW unit recommends users choose one of the following options:

1. Apply weighted averages for each role based on the actual hours taken in the previous year(s).
2. Apply 8 hours per FTE to roles as per the relevant MECA agreement.

### *Calculating professional development hours* [FTE]

The MECA states:

- 27.1 The employer shall grant professional development leave of 32 hours per calendar year for full time employees (pro rated to no less than 8 hours per calendar year for part time employees) who are registered/enrolled nurses and/or midwives. This leave is to enable employees to complete qualifications, to attend courses and to undertake research or projects that are relevant to the employer and which facilitate the employee's growth and development. 8 hours per calendar year shall be available for Health Care Assistants and Hospital Aides who are preparing to apply for Merit 1 or Merit 2. Prior approval of the employer must be obtained.

In addition, related to New Graduates, the following clause applies: [Head]

- 27.6 New Graduate study days are in addition to those stated above.

Also, for some staff the following clause will apply:

- 27.7 Staff working on preparing a portfolio, obtaining or maintaining skill levels associated with the Professional Development and Recognition Programme are entitled to additional leave in order to undertake research or study associated with meeting the PDRP requirements as follows:

#### **Level**

Proficient	1 day p.a.
Expert / Accomplished	2 days p.a.

The clauses above are considered minimum entitlements. Existing Nurses, New Nurses, New Graduate Nurses and the Clinical Nurse Manager will all receive a minimum of 32 hours. Existing HCAs and New HCAs will receive 8 hours. The number of hours Bureau staff receive will depend on your contractual obligations in regards to this staff group.

New Graduates will receive their allocated number of study days as per the DHB's Nurse Entry to Practice (NETP) programme specifications in addition to the 32 hours above. This is usually 12 days (96 hours), but may vary between DHBs and should be calculated as a headcount as each NETP is entitled to the full entitlement.

**Example 1:** A ward expects three New Graduates who will be working at 0.8 FTE in the upcoming year. This represents a total of 2.4 FTE. Each New graduate is entitled to 96hrs of NETP professional development. To calculate the hours per FTE, the calculation  $[96\text{hrs} \div 0.8 \text{ (FTE worked)}] \times 1 = 120\text{hrs}$  per FTE. MECA entitlements should add a further 32hrs creating a total of 152 hours for new graduate professional development per FTE.

For the additional portfolio days, it is recommended that you calculate how many staff are entitled to one day per annum and how many are entitled to two days per annum. Then total the hours and average this number across all nursing FTE (not including New Graduates and HCAs).

Example 2: 10 nursing FTE are entitled to one additional day per annum, and 4 FTE are entitled to 2 additional days. The ward employs nursing staff (excluding new graduates and HCAs) of 25 FTE.

$[10 \text{ FTE} \times 1 \text{ day}] + [4 \text{ FTE} \times 2 \text{ days}] = 18 \text{ days per annum}$

$18 \text{ days} \times 8 \text{ hours} = 144 \text{ hours per year}$

$144 \text{ hours} \div 25 \text{ FTE} = 5.76 \text{ hours per RN/EN per year}$

Note these hours would be added to the minimum entitlement of 32 hours for regulated staff.

### SSHW Unit default professional development hours

Staff type	Professional development hours per year
Existing Nurse or midwife	32
Existing HCA	8
New Nurse or midwife	32
New HCA	8
New Graduate Nurse or Midwife	120
Bureau staff	0
Clinical Nurse or Midwifery Manager	32

In summary, the SSHW unit recommends users choose one of the following options:

1. The average entitlement per FTE (by role) from the previous year or years
2. Applying entitlements to each role as per the SSHW units default professional hours table

### Calculating Orientation and Supernumerary Time [FTE]

New employees will have requirements in terms of hours of orientation and supernumerary time at the beginning of their period of employment. Each DHB should have policies in place around this time, ideally as a written document. Orientation time may be divided into organisational orientation and ward orientation. Some wards will have higher requirements for ward orientation and supernumerary time (e.g. Intensive Care Unit).

Consult with your DHB's policies and business rules around new employees and the required orientation (organisation and ward) and supernumerary time.

New Graduates should receive training for required competencies when they join the organisation as part of their orientation package (e.g. CPR and IV training).

### SSHW Unit default orientation and supernumerary hours

Staff type	Orientation hours per year	Supernumerary hours per year
New Nurse or Midwife	24	120
New HCA	24	40
New Graduate Nurse or Midwife	0	180 or, as per organisationally agreed TrendCare business rules

Assumptions:

- New Nurses receive a minimum of 3 weeks of supernumerary time

- New HCAs receive a minimum of 1 week supernumerary time
- New Graduate Nurses receive a minimum of 180 hours supernumerary because as per the NETP Specifications, they will be "sharing the clinical caseload for six weeks in total" (New Entry to Practice (NETP) and Aged Residential Care NETP Programme, p. 1). The 180 hours are calculated on the basis of three weeks supernumerary (120 hours) and a graduating increase in shared workload for the remaining three weeks. For example, week 4 (30 hours supernumerary), week 5 (20 hours supernumerary), and week 6 (10 hours supernumerary). The exact split of hours between the NETP and clinical preceptor will be dependent on DHB policy, ward context and the identified individual needs of the New Graduate Nurse.

In summary, the SSHW unit recommends users choose one of the following options:

1. The average entitlement per FTE (by role) from the previous year or years based on actual turnover in the previous year(s)
2. Applying orientation and Supernumerary hours to roles as per the recommended default table
3. As per organisationally agreed TrendCare business rules

### *Calculating recertification hours* [FTE]

The MECA states the following:

- 27.3** Paid leave to meet organisational and service requirements, and those HPCA requirements not otherwise addressed in this clause, shall be granted in addition to the above provisions. The employer will meet any associated costs.

In combination with clause 27.1 of the MECA (under the Professional Development section in this user guide), this leads to the interpretation that professional development time is for growth and development, not maintenance of existing competencies or requirements of the organisation or service work for. These requirements mean the staff will be absent for additional time every few years to maintain existing training.

Obtain a list of all the organisation and/or service competencies with regular recertification as part of their requirements. Examples include Adult CPR, breastfeeding, Baby-Friendly Hospital Initiative, CPAP, Treaty of Waitangi, Health & Safety, and IV certification. Some of these competencies will apply to all staff, and some will only apply to particular wards.

Work out the number of hours training and the time period the training lasts. For example, an Adult CPR training update may take two hours every year, while Breastfeeding training update requires four hours every three years. Total the average number of hours per year this requires.

This should be applied to all Existing Nurses and Midwives, Existing HCAs, New Nurses and Midwives, New HCAs and the Clinical Nurse or midwife Managers.

New Graduates should receive initial training in any lacking competencies as part of their orientation time.

Whether Bureau staff receive this time will depend on your contractual obligations.

In summary, the SSHW unit recommends users follow the option:

1. Apply the average training hours required per FTE (by role) from the previous year or years

### *Calculating additional leave*

There are several additional types of leave that should be factored into a staff member's available hours. These may vary depending on the appropriate MECA for the profession:

#### ***20.0 NZNO Meetings***

- 20.1 Union members shall be entitled to up to a total of 4 hours leave per year (a year being the period beginning on the 1st day of January and ending on the following 31st day of December) on ordinary pay to attend meetings authorised by the union providing the following conditions are fulfilled.

Leave to attend meetings should be based on the average leave taken per FTE in the previous year or years/s up to four hours. This number should be applied to all staff types.

The SSHW Unit does not currently have a default value for additional leave. However, it is recommended that additional paid leave is factored into the FTE calculation.