

# ELECTRONIC STAFF RECORD

# ESR-NHS0245 - Creating Standard Measures in ESR BI

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Approvals:

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## 1. DOCUMENT CONTROL

## 1.1. Change Record

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04/10/2016	James Haddon	0.1	Initial Draft
30/01/2017	Chris Holroyd	0.2	Updated to include new measures
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## 1.2. Reviewers

Name	Position
NHS Development Team	

## 1.3. Distribution

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	Library Master	Programme Library

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## 3. INTRODUCTION

HR and Workforce professionals use a number of calculations to measure changes within organisations and departments. These include:

- FTE Days Lost
- FTE % Lost
- Long Term / Short Term Analysis
- # Occurrences

These measures are possible to recreate in ESR BI when creating new analyses from scratch. This document aims to detail the calculation behind each measure, and quickly show how to implement this in ESR BI.

Note: In order to follow this document and create your own reports/analyses in ESR BI, you must have already been allocated the 'BI Administration URP' within ESR.

## 4. ABSENCE

All of the measures in this section are based on the "Human Resources – Absence" Subject Area in ESR BI:



## 4.1. Measures

### 4.1.1. FTE Days Lost

#### Description

FTE Lost is a measure of the full time equivalent lost within a period (normally due to Sickness absence). This is calculated as:

FTE \* Calendar Days Absent.

An example might be where an employee with an FTE of 1 (AfC Assignment who works 37.5 hours / week) is away from work for 2 weeks due to sickness:

Absence Start Date: 04/01/2016 Absence End Date: 17/01/2016

Their FTE Days Lost is measured as '14' since their FTE is 1 and the number of calendar days absent is 14.  $14 \times 1 = 14$ .

Were the employee to have an FTE of 0.5, then their FTE Days Lost would be '7'.

Implementation in ESR BI

Step	Screenshot	Description
1		Create a new analysis based on the Absence Subject Area
2	2° 1	Create a new filter on the 'Date' item from the 'Time' folder.

Step	Screenshot	Description
	Criteria Results Prompts  Subject Areas Q V  Comparison  Date  Date  Date  Month	
3	New Filter       ② ×         Column       Date       ☑ ♀         Operator       is between       ✓         Value       01/01/2016       ✓ ♦         Value       31/03/2016       ✓ ♦         Add More Options ▼       Clear All         □       Protect Filter         □       Convert this filter to SQL	Restrict the date to a period of your choosing (use at least 3 months as an example)
4	▲ ● Time       Date         ● Daty Name       ● Double click on column names in the Subject A delete by clicking or hovering over the button r         ● Month       ● Month         ● Month       ● Month         ● Year       ● Week         ● Quarter       ● Month         ● Year       ● Month         ● Absence       ● Assignment         ● Assignment       ● Assignment         ● Assignment       ● Assignment         ● Organization       ● Organization         ● Organization       ● Organization	Add any columns you wish to group on to the analysis (in this example, we will group by 'Month').
5	Supervisor  Facts - Human Resources - We  Absence Facts  Absence Davs  The Absence FTE  The Notified Absence Days  The Absence Days  The Absence Hours	Expand the Facts folder, then the absence facts folder. Within here you will find the Absence FTE measure. Double-click it.
6	Human Resources - Absence Time Absence Absence Absence Type / Reason Absence Category Code Absence Category Description Absence Type Code	Create a new filter to filter for a specific absence type (normally 'Sickness')
7	New Filter          ② ×        Column     Absence Type          ☑        Operator     is equal to / is in          ✓        Value     Sickness     × ♥ 🏟       Add More Options ♥     Clear All       Protect Filter       Convert this filter to SQL	Enter a value to filter for

Step	Screenshot			Description
8		Table 🗖	📅 🥖 🗙	Click the results tab. You now have the FT Lost by Month
		Month	Absence FTE	
		2016 / 01	93.0	
		2016 / 02	87.0	
		2016 / 03	93.0	

### 4.1.2. FTE % Lost

#### Description

FTE % lost is a measure of the % of working time lost compared to 'available' working time. Since ESR does not record when a person works, both FTE Lost and FTE Available are calculated using calendar days. As an example, take an employee who has an FTE of 1 (37.5 hours / week) who works throughout January. Although they may only work Monday to Friday, their available time is calculated as 31 (31 Days x 1 FTE).

In the same example, let's assume the employee had 3 days off work due to sickness (11/01 - 13/01). For the whole of January, their Available FTE is 31. The FTE lost is 3. To work out the FTE % Lost, simply divide the FTE Lost by Available FTE and multiply the result by 100:

#### (3/31) \* 100 = 9.68 %

This figure is normally calculated for Sickness absence only, and is done at an aggregated level (e.g. Staff Group, Organisation etc).



### Implementation in ESR BI

Step	Screenshot	Description
4	▲ ● Time       ▲ Selected Columns         ● □ Time       ■ Date         ■ □ Date       ■ Date         ■ □ Date       ■ Double click on column names in the Subdedlet by clicking or hovering over the builded to be provided	Add any columns you wish to group on to the analysis (in this example, we will group by 'Month').
5		Create a new filter to filter for a specific absence type (normally 'Sickness')
6	New Filter         Column       Absence Type         Operator       is equal to / is in         Value       Sickness         Add More Options        Clear All         Protect Filter       Convert this filter to SQL	<ul> <li>Enter a value to filter for (Sickness)</li> </ul>
7	<ul> <li>Facts - Human Resources - Workforce Absen</li> <li>Absence Facts</li> <li>Headcount Facts</li> <li>Active Headcount</li> <li>Employee Headcount</li> <li>FTE (Assignment)</li> <li>Contingent Worker Headcount</li> </ul>	Expand the Facts folder, then expand the Headcount Facts folder. Find the FTE (Assignment) item and double click it (This will return 'Available' FTE).
8	Period of Placement Band     Supervisor     Facts - Human Resources - Workforce     Absence Facts     Absence Days     The Absence FTE     Thotified Absence Days     The Absence Days	Expand the absence facts folder. Find the Absence FTE measure and double- click it.

und Facts folder and ΓΕ %' item. Double
<ul><li>you now have</li><li>% FTE rates.</li></ul>

## 4.1.3. Long Term / Short Term

### Description

This measure divides absences by the total length of the absence (even if the absence starts or ends outside of the reporting period). Generally across the NHS the accepted length of a 'Long Term' absence is 28 calendar days or greater – anything else is considered 'Short Term'.

#### Implementation in ESR BI

Step	Screenshot	Description
1		Create a new analysis based on the Absence Subject Area
2	Criteria Results Prompts  Criteria Results Prompts  Subject Areas Q VA   Main Resources - Absence  Time Time Time Time Time Time Time Ti	Create a new filter on the 'Date' item from the 'Time' folder.
3	New Filter       Image: Column Date       Image: Column Date       Image: Column Date         Operator       is between       Image: Column Date       Image: Column Date         Value       01/01/2016       Image: Column Date       Image: Column Date         Add More Options Image: Clear All       Image: Column Date       Image: Column Date         Image: Convert this filter to SQL       Image: Column Date       Image: Column Date	Restrict the date to a period of your choosing (use at least 3 months as an example)
4	With Human Resources - Absence Time Date Date Date Date Dote	Add any columns you wish to group on to the analysis (in this example, we will group by 'Month').
5		Create a new filter to filter for a specific absence type (normally 'Sickness')

Step	Screenshot	Description
	<ul> <li>Human Resources - Absence</li> <li>Time</li> <li>Absence</li> <li>Absence Attributes</li> <li>Absence Type / Reason</li> <li>Absence Category Code</li> <li>Absence Category</li> <li>Absence Category</li> <li>Absence Category Description</li> <li>Absence Type Code</li> <li>Absence Type</li> <li>Absence Type Description</li> </ul>	
6	New Filter       ② ×         Column       Absence Type       Image: Column of the second seco	Enter a value to filter for (Sickness)
	<ul> <li>Salary Cost Per Day</li> <li>"FTE OSP OMP Adjusted</li> <li>"ABSENCE_EVENT_WID</li> <li>"Hours Lost</li> <li>"Long Term Absence FTE</li> <li>"Short Term Absence FTE</li> </ul>	Expand the Facts folder and the Absence Facts folder. Add the Long Term Absence FTE and Short Term Absence FTE items to the analysis.
7	<ul> <li>Facts - Human Resources - Workforce Absence</li> <li>Absence Facts</li> <li>Headcount Facts</li> <li>Compound Facts - Operations and Absence</li> <li>Average Days per Employee</li> <li>W Arenge Days per Employee</li> <li>W Frequency Rate</li> <li>W Assignment Count%</li> <li>W Absence FTE %</li> <li>Rolling Absence FTE %</li> <li>Short Term Absence FTE %</li> </ul>	Expand the Compound Facts folder. Add the Long Term Absence FTE % and Short Term Absence FTE % items to the analysis.
8	Month         Short Term Absence FTE         Long Term Absence FTE         Short Term Absence FTE %         Long Term Absence FTE %           2016 / 01         0.0         93.0         0.0         0.4           2016 / 02         0.0         87.0         0.0         0.4           2016 / 03         0.0         93.0         0.0         0.4	Click the Results tab. You now have all Long Term / Short Term measures on an analysis.

## 5. ABSENCE WITHIN WORKFORCE

Within the Workforce Subject Area users can return Absence Attributes and Absence Measures in a similar way to using them within the Absence Subject Area. When returning assignment information within the Absence Subject Area, data is returned as at the absence date. Using the Workforce Subject Area allows users to return assignment information as at an effective date alongside absence information.

## 5.1. Using Absence items within Workforce

#### Description

When using absence within workforce, two separate date filters are required in order to define a workforce effective date and an absence period.

#### Implementation in ESRBI

Step	Screenshot	Description
1		Create a new analysis based on the Workforce Subject Area
2	Subject Areas Q VA V Q VA	Create a new filter on the 'Date' item from the 'Time' folder.
3	New Filter     Column   Date   Operator   is equal to / is in   Value   01/01/2017   Add More Options    Clear All     Protect Filter   Convert this filter to SQL	Restrict the date to an effective date. This will be the effective date of the assignment/employe e information included within the analysis.
4	✓ Selected Columns         Double click on column names in the Subject Areas pane to add them to the analysis. Once added, dra delete by clicking or hovering over the button next to its name.         Employee Attributes       Assignment         Organization       Position         Employee Number 등       Assignment Number 등         Organization Name 등       Position 등	Add any assignment/employe e columns to be used within the analysis.
5	<ul> <li>Assignment</li> <li>Assignment Cost Centre</li> <li>Absence</li> <li>Absence Facts</li> <li>Absence Date</li> <li>"Date</li> <li>"Day Name</li> <li>"Month Name</li> </ul>	Add a new filter based on the Date item from the Absence Date folder.

Step	Screenshot					Description
6	New Filter	Restrict the Absence Date to a period.				
	Column	Date	1 <b>6</b> 🔁			period of absence to
	Operator	is between		~		return.
	Value	01/01/2017		🕶 馣		
	Value	31/03/2017		× 🕶 馣		
		Add More Options 🔻	Clear All			
7	Absence     A	Facts Ince Days Ince FTE Ince Hours Ince Hours Ince Cocurrences Ince Estimated Cost Is Lost I Term Absence FTE Date Attributes Ince Start Date Ince End Date Ince Entered Date Ince Notified Date Ites I Date III Absence End D	ate 🚉 🔒 Absenc	e Type / Reason Absence Facts ence Reason 🗮 🖪 Absence Days	119	Include any absence columns to be included within the analysis.
8	Employee Number         Assignmer           20055377         20055377           2005523         20055623           2005525         2005525           20095279         20095279           20095284         20095284	tt Number Örganization Name Position Absence 504 Team Midwifery Unspecified 01/09/ 504 Ward 9 Unspecified 02/09/ 504 Ward 9 Unspecified 02/09/ 504 Ward 10 Unspecified 06/10/ 504 Ward 10 Unspecified 10/11/	e Start Date Absence End Da 2014 31/12/4712 2014 31/12/4712 2014 31/12/4712 2014 31/12/4712 2014 31/12/4712	te Absence Reason Abse S19 Heart, cardiac & circulatory problems S15 Cheat & respiratory problems S10 Anxiety/spread/epression/other psychiatric illnesses Maternity Leave Maternity Leave	ence Days 90.0 90.0 90.0 90.0 90.0	Click the Results tab. Assignment details are now returned at an effective date alongside absence information.

## 6. PAYROLL

All of the items described in this section of the document are based on the 'Human Resources – Payroll' subject area within ESRBI but may be available in multiple subject areas:



### 6.1. Measures

### 6.1.1. Average Hourly Rate

#### Description

The Average Hourly Rate is calculated using the following method; (Sum of Full Time Salary multiplied by FTE) divided by (Sum of Contract Hours multiplied by 52.1428 (to provide yearly hours)) with the result then divided by the number of distinct assignments.

#### Implementation in ESRBI

Step	Screenshot	Description
1		Create a new analysis based on the Payroll Subject Area (although this measure is available across a number of subject areas).
2	2° 1	Create a new filter based on the Date item from the Time
	∠ Subject Areas 🔍 🖗 🖓	folder.
	Human Resources - Payroll	
	🔺 🛅 Time	
	Pegular Payment     Date     Day Name     Month	

Step	Screenshot							Description
3	New Filter						3 ×	Restrict the date to an effective period.
	Column	Date		FØ 🖵				
	Operator	is between			~	-		
	Value	01/01/2016					✓	
	Value	31/03/2016				×	<b>∨ @</b>	
		Add More Op	tions 👻	Clear All				
4	Selected	Columns						Add any columns you
	Double click delete by clic Job	on column nam :king or hoverin :ff Group 🗮	es in the s g over the	51				Wish to group on to the analysis (in this example, we will group by 'Staff Group').
5	E Gracts	- Human Resour orce Profile Fact signment Count nployee Count D	ces - Payr t : Distinct Vistinct	roll				Expand the Workforce Profile Facts folder.
6	···· Average / ···· Average / ···· % of Lear	Age (Years) Hourly Rate vers to Non-NH! ff Employed Aftr	S Destinat er 12 Mon	ion ths				Scroll down and include the Average Hourly Rate measure in the analysis.
7	Table			/ ×	-			Click the Results Tab and the results of the
	Main Staff Grou	p	Average H	ourly Rate				displayed.
	Add Prof Scienti	ific and Technic		23.8				
	Additional Clinic	al Services		5.5				
	Administrative a	and Clerical		1.7				
	Allied Health Pro	otessionals						
	Murging and Mis	ntai dwifery		1/./				
	Registered	Iwitel y		14.0				

## 7. STAFF REQUIREMENTS

All of the items described in this section of the document are based on the 'Human Resources – Workforce Profile' subject area within ESRBI but may be available in multiple subject areas:



## 7.1. Measures

### 7.1.1. Professional Registration Matching %

#### Description

Professional Registration Matching % is the number of employees who require a professional registration (as recorded against the position) and who have a valid matching professional registration (recorded against their employee record) as a percentage of the total number of employees that require a professional registration.

#### Implementation in ESRBI

Step	Screenshot	Description
1		Create a new analysis based on the Workforce Subject Area (although this measure is available across a number of subject areas).
2	2 × 1	Create a new filter based on the Date item from the Time
	🔟 Subject Areas 🔍 🖗 🦓	folder.
	🔺 🝈 Human Resources - Workforce Prc 📥	
	✓ Time ☐… Date ☐… Day Name ☐… Month	

Step	Screenshot			Description
3	New Filter Column Date Operator is equal to / is in Value 01/01/2017 Add More Options  Protect Filter Convert this filter to SQL	② × ☑ ♀ × ♥ ♠ Clear All		Restrict the date to an effective date.
4	✓ Selected Columns Double click on column nam delete by clicking or hovering Job Main Staff Group  €	es in the Subjec g over the buttc		Add any columns you wish to group on to the analysis (in this example, we will group by 'Staff Group').
5	Supervisor     Supervisor (Previous)     Facts - Human Resour     Workforce Profile F     Workforce Profile F     Workforce Profile F	Expand the Facts – Human Resources - Workforce Profile>Workforce Profile Facts folder.		
6	<ul> <li>Right to Work %</li> <li>Professional Registration I</li> <li>DBS Matching %</li> <li>Appraisals In Date</li> <li>Appraisals %</li> </ul>		Scroll down and include the Professional Registrations Matching % measure in the analysis.	
7	Table Main Staff Group Add Prof Scientific and Technic Additional Clinical Services Administrative and Clerical Allied Health Professionals Medical and Dental Nursing and Midwifery Registered	Image: Professional Registration Matching %           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           0.0           0.0           0.0           0.0           0.0           0.0		Click the Results Tab and the results of the analysis are displayed.

## 7.1.2. Right to Work %

Description

All employees within ESR should have a Right to Work recorded within the system. An Employee fulfils the Right to Work criteria if:

(Work Permit Required = 'Yes' AND List B (First Combination) Reference Number IS NOT NULL and Is in Date)

OR (Residency Status = 'Temporary' AND List B Group 1 Source Document Checked IS NOT NULL and Is in Date)

OR (Residency Status = 'Temporary' AND LIST B Group 2 Source Document Checked IS NOT NULL and Is in Date)

OR List A Source Document Checked IS NOT NULL. The number of employees fulfilling the criteria is divided by the total headcount to provide a percentage.

## Implementation within ESRBI

Step	Screenshot	Description
1		Create a new analysis based on the Workforce Subject Area (although this measure is available across a number of subject areas).
2	Subject Areas Q VA V Q VA Human Resources - Workforce Prc Time Time Time Time Time Month	Create a new filter based on the Date item from the Time folder.
3	New Filter     Column   Date   Operator   is equal to / is in   Value   01/01/2017   Add More Options    Clear All     Protect Filter   Convert this filter to SQL	Restrict the date to an effective date.
4	✓ Selected Columns Double click on column names in the Subject delete by clicking or hovering over the butto Job Main Staff Group	Add any columns you wish to group on to the analysis (in this example, we will group by 'Staff Group').
5	<ul> <li>Supervisor</li> <li>Supervisor (Previous)</li> <li>Facts - Human Resources - Workforce Profile</li> <li>Workforce Profile Facts</li> <li>Headcount</li> <li>Prior Period Headcount</li> </ul>	Expand the Facts – Human Resources - Workforce Profile>Workforce Profile Facts folder.
6	<ul> <li>Right to Work %</li> <li>Professional Registration Matching %</li> <li>DBS Matching %</li> <li>Appraisals In Date</li> <li>Appraisals %</li> </ul>	Scroll down and include the Right to Work % measure in the analysis.

Step	Screenshot		Description
7	Table	😼 📰 🥢 🗙	Click the Results Tab and the results of the analysis are
	Main Staff Group	Right to Work %	displayed.
	Add Prof Scientific and Technic	0.0	
	Additional Clinical Services	0.0	
	Administrative and Clerical	0.0	
	Allied Health Professionals	0.0	
	Medical and Dental	0.0	
	Nursing and Midwifery Registered	0.0	
		0.0	

### 7.1.3. DBS Matching %

#### Description

The DBS Matching % measure is based on the below formula and provides the % of assignments that have a correct and valid DBS recorded against them. Formula: (Number of assignments that require a DBS (as recorded against the position) with a DBS check at the correct level or higher recorded / Number of assignments with a DBS requirement) \* 100

### Implementation within ESRBI

Step	Screenshot	Description
1		Create a new analysis based on the Workforce Subject Area (although this measure is available across a number of subject areas).
2	Subject Areas Q QA Comparison of the comparison	Create a new filter based on the Date item from the Time folder.
3	New Filter	Restrict the date to an effective date.
	Convert this filter to SQL	

Step	Screenshot			Description
4	Selected Columns Double click on column names in the Subject delete by clicking or hovering over the buttc Job Main Staff Group			Add any columns you wish to group on to the analysis (in this example, we will group by 'Staff Group').
5	Supervisor     Supervisor (Previous)     Facts - Human Resources - V     Workforce Profile Facts     Workforce Profile Facts     ""Headcount     ""Prior Period Headcou		Expand the Facts – Human Resources - Workforce Profile>Workforce Profile Facts folder.	
6	Right to Work %     Professional Registration Matching %     DBS Matching %     Appraisals In Date     Appraisals In Date			Scroll down and include the DBS Matching % measure in the analysis.
7	Table         Main Staff Group         Add Prof Scientific and Technic         Additional Clinical Services         Administrative and Clerical         Allied Health Professionals         Medical and Dental         Nursing and Midwifery         Registered	DBS Matching % 100.0 97.8 86.7 100.0 100.0 98.7		Click the Results Tab and the results of the analysis are displayed.
		100.0		

### 7.1.4. Appraisals %

#### Description

All employees within ESR should have an Appraisal recorded every 12 months. The Appraisals % measure provides users with the number of Appraisals completed / Headcount \* 100. Completed appraisals can be defined as a distinct count of completed appraisals in the last 12 months. (e.g. if a person has 2 completed appraisals in the period, this should be counted only once).

#### Implementation within ESRBI

Step	Screenshot	Description
1		Create a new analysis based on the Workforce Subject Area (although this measure is available across a number of subject areas).

Step	Screenshot		Description
2	Subject Areas Q ♦♦▼	1	Create a new filter based on the Date item from the Time folder.
	<ul> <li>Human Resources - Workford</li> <li>Time</li> <li>Time</li> <li>Time</li> <li>Tote</li> <li>Tote</li> <li>Tote</li> <li>Tote</li> <li>Month</li> </ul>	ce Prc	
3	New Filter	(2 ×	Restrict the date to
	Column Date 😿	2	
	Operator is equal to / is in		
	Value 01/01/2017	× • 🔂	
	Add More Options - Clea		
	Convert this filter to SOL		
	Convert this filter to SQL		
4	✓ Selected Columns Double click on column names in th delete by clicking or hovering over	ne Subjec the butto	Add any columns you wish to group on to the analysis (in this example, we will group by 'Staff
	Job Hain Staff Group 🗮		Group ).
5	Supervisor     Supervisor (Previous)     Supervisor (Previous)     Facts - Human Resources - W     Workforce Profile Facts     Workforce Profile Facts     Frior Period Headcount	Expand the Facts – Human Resources - Workforce Profile>Workforce Profile Facts folder.	
6	<ul> <li>Right to Work %</li> <li>Professional Registration Matchin</li> <li>DBS Matching %</li> <li>Appraisals In Date</li> <li>Appraisals %</li> </ul>	g %	Scroll down and include the Appraisals % measure in the analysis.
7	Table	📰 🥒 🗙	Click the Results Tab and the results of the analysis are
	Main Staff Group	Appraisals %	displayed.
	Add Prof Scientific and Technic	0.0	
	Additional Clinical Services	0.0	
	Administrative and Clerical	0.0	
	Allied Health Professionals	0.0	
	Medical and Dental	0.0	
	Nursing and Midwifery Registered	0.0	
		0.0	