

# Benchmarking dashboard User Guide

ICU Data Capture System

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# **Document History**

Revision date	Author	Version	Changes
04/05/2018	Public Health England	1.0	-
07/10/2020	Public Health England	1.1	-
20/12/2024	William McMillan and Matt Wilson, UK Health Security Agency	1.2	<ul> <li>Updated branding (PHE to UKHSA)</li> <li>Updated screenshots</li> </ul>

# Using the ICU Benchmarking Dashboard

## Introduction

There are up to two report dashboards available to users depending on their permissions and access to the system. The dashboards provide an overview of data on the system to direct user's workflow and highlight outstanding actions. The available dashboards are:

- Intensive Care Unit (ICU) Summary (summary of cases entered onto the system, data completeness and sign-off) - please see the <u>'ICU Summary Dashboard User</u> <u>Guide'</u> for further information;
- ICU Benchmarking (allows users to assess their organisation compared to other organisations in terms of rates and counts of reported cases).

# ICU Benchmarking Dashboard

The ICU Benchmarking Dashboard allows users to compare a specific organisation (for example an ICU in an National Health Service (NHS) Trust) against a selection of other user-specified ICUs (within their same Trust or ICUs in other NHS Trusts). This report can display both counts and rates for the selected time period. The default is for this report to display rates because count data does not take into account the size of the organisations being compared. Therefore, we recommend running this report using a rate (Please note: although useful for benchmarking, calcuated rates should still be interpreted with caution as they are unadjusted for such factors as age, gender, case mix and so on).

To access the ICU Benchmarking Dashboard, click on the appropriate tab (Figure 1) and the ICU Data Capture System (DCS) will navigate you to the ICU Benchmarking Dashboard. When first landing on the Dashboard the parameter selections are hidden. To view and modify the available parameters, click on the small arrow below the tab name (Figure 1). The parameters can be hidden by clicking this arrow again.

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### Figure 1: Accessing the ICU Benchmaking Dashboard

The parameters can be adjusted using the various drop-down menus available. An overview of the different report parameters on the ICU Benchmarking Dashboard can be found in <u>Table 1</u>. Once you have made any amendments to the parameter filters, click on 'View Report' for it to run and provide you with the relevant data (<u>Figure 2</u>).

#### Figure 2: ICU Benchmaking Dashboard Parameters

Region	NATIONAL	Summarisation Type	Rate 🗸	View
Organisation Type	UK Health Security Agency	ICU Classification	-All- 🗸	
Chart Type	Bar Chart 🗸	Comparator	UK Health Security Agency	
Year Type	Financial Year 🗸	Organisation	UK Health Security Agency	
Data Collection	ICU Blood Stream Infections V	Year	2020/2021 🗸	
Sector	NHS V	Limit report to	-All-	
Source	All 🗸	Denominator	Occupied bed days (per 1,000)	
Denominator Period	Most Applicable 🗸	Frequency	Monthly 🗸	
Organism	ACHROMOBACTER SPECIES, ACIN	Bacteraemia Category	/ -All-	

## Table 1: ICU Benchmarking Dashboard Parameter Options

Parameter	Comment	Parameter Type	Note
Region	Changes the region(s) that the data are presented for in this report.	Multi-select drop- down	The default value is the user's region.
Summarisation Type	Changes whether the data are presented in terms of a count or a rate.	Drop-down	The default value is 'Rate'.
Organisation Type	Changes the organisation type the report displays the data by.	Drop-down	The default value is the user's organisation type.
ICU Classification	Changes the type of unit for which data are displayed	Drop-down	The default option is '-All-'; other options include 'Adult', 'Neonatal' and 'Paediatric'
Chart Type	Changes how the data are displayed in the chart.	Drop-down	The default value is 'Bar Chart'.
Comparator	Changes which organisations are used for benchmarking against.	Multi-select drop- down Please note: The drop-down menu can be made larger, so that you can read the full name of the organisations, by clicking on and dragging the bottom right-hand corner to a wider point:	Select the organisation(s) that will be used for comparison including the one you wish to compare. Organisations for which a user has permission to view data will be pre- selected.

Parameter	Comment	Parameter Type	Note
			Please note: The list of available organisations will be limited by the 'Region' selected previously.
Year Type	Changes whether the data are displayed in terms of Financial or Calendar Year.	Drop-down	The default is 'Financial Year'.
Organisation	Changes which organisation is compared to the Comparator organisation(s).	Drop-down	The default organisation will be the organisation you are signed in under (if a user has access to multiple ICUs, all of these will be listed). Additional organisation(s) options comprise all other organisations selected in 'Comparator' drop- down menu.
			This is a single select drop-down menu, so that only one organisation can be selected for comparison to the rest of the comparator organisations at a time.

Parameter	Comment	Parameter Type	Note
Data Collection	Changes which data are presented in the comparison report.	Drop-down	The default value is 'ICU Blood Stream Infections'. Other options include 'ICU Monthly Census' and 'ICU Daily Census'
			Please note: While ICU Daily Census and ICU Monthly Census are options for Data Collection, please note that the report will only run for 'Summarisation Type' = 'Count' for these collections as they are denominator data collections. Therefore they cannot be used to calculate a rate (the default option for Denominator and Denominator Period parameters will be 'Not applicable').
Year	Changes the year for which data are displayed.	Drop-down	The default value is the current year.
			Please note: Whether this is a financial year or a calendar year of data displayed will depend on the 'Year Type' selection (see above).

Parameter	Comment	Parameter Type	Note
Sector	Changes the sector for which this report presents data.	Drop-down	The default value is be 'NHS' for NHS organisations and 'IS' for Independent Sector ICUs.
Limit Report To	Changes whether 'All', 'ICU-associated' or 'Pre-ICU' positive blood cultures are included in the rate calculations	Drop-down	The default is 'All'
Source	Changes the site thought to be related to the infection	Drop-down	The default value is 'All'
Denominator	Changes the denominator used for rate calculation within the report.	Drop-down	This option is only available if 'Summarisation Type' is set to 'Rate' and 'Data Collection' is set to 'ICU Blood Stream Infections'. The default value is dependent on the 'Organisation Type',
			'Data Collection', 'Source' and 'Limit Report To' fields that have been selected.
			For example, for 'Organisation Type' = 'Intensive Care Units', 'Source' = 'All' and 'Limit Report To' = 'All', the default denominator for ICU

Parameter	Comment	Parameter Type	Note
			Blood Stream Infections will be 'Occupied bed days (per 1,000)'.
			However, if 'Limit Report To' was amended to 'ICU- associated' then the default denominator would be 'Occupied bed days, for patients in the unit >2 nights (per 1000)'.
			All denominator values that are suitable for the 'Organisation Type', 'Data Collection' and 'Limit Report To' filters already selected will be shown in the Denominator filter.
			Further information on denominators and appropriate denominator selection can be found in the <u>Denominators User</u> <u>Guide</u> .
Denominator Period	Changes the denominator year	Drop-down	The default value is 'Most Applicable'. When this option is

Parameter	Comment	Parameter Type	Note
	applied for rate calculation.		selected the system will automatically select the time period of the denominator to cover the 'Period From' and 'Period To' dates entered. This option is only available if 'Summarisation Type' is set to 'Rate'.
			<b>Please note</b> : whether financial year or calendar year values are displayed will depend on the 'Year Type' selected.
			Further information on denominators and appropriate denominator selection can be found in the <u>'Denominators User</u> Guide'
Frequency	Changes the frequency at which data are displayed.	Drop-down	The default value is 'Monthly'
Organism	Changes the organism detected in blood culture sets	Drop-down	The default option is 'All'
Bacteraemia Category	Allows the report to present data for All positive blood cultures, those	Drop-down	The default option is 'All'

Parameter	Comment	Parameter Type	Note
	defined as blood stream infections, those neonatal infections defined as blood stream infections using the different NDAU definitions or those defined as		
	uncategorised.		

The report output provides a comparison of an organisation (usually the user's organisation) against selected comparator organisations of the same organisation type. The output is available as either a Bar Chart or a Dot Plot.

When the parameter 'Chart Type' is set to 'Bar Chart' the selected 'Organisation' will be represented by turquoise bars. The 'Comparator' organisations are represented by grey bars (<u>Figure 3</u>).

### Figure 3: ICU Benchmarking Dashboard Output (Bar Chart)

Home	Summary	іси	J Summ	nary	Bend	hmarking	ICU Benchmarking	Data Quality
Region	NATIONAL	<ul> <li></li> </ul>	5	Summarisa	tion Type	Rate 🗸		
Organisation Type	Intensive Care Unit		<b>~</b>	CU Classif	ication	-All- 🗸		
Chart Type	Bar Chart 🗸		c	Comparato	r			
Year Type	Financial Year 🗸		c	Organisati	on			
Data Collection	ICU Blood Stream Infections 🗸		1	Year		2020/2021 🗸		
Sector	NHS 🗸		L	Limit repor	t to	-All- 🗸	•	
Source	All 🖌			Denominat	or	Occupied bed days	s (per 1,000) 🛛 💙	
Denominator Period	Most Applicable 🗸 🗸	)	F	Frequency		Monthly 🗙		
Organism	ACHROMOBACTER SPECIES, ACI	$\sim$	E	Bacteraem	ia Category	-All-	~	
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When the parameter 'Chart Type' is set to 'Dot Plot' the selected organisation will be represented by turquoise triangles. The comparator organisations are represented by grey circles (Figure 4).

### Figure 4: ICU Benchmarking Dashboard Output (Dot Chart)

Home	Summary	ICU Sumr	nary	Bencl	nmarking	ICU Benchmarking	Data Quality
Region Organisation Type Chart Type Year Type Data Collection Sector Source Denominator Period Organism	NATIONAL IK Health Search Agency Dot Plot CU Blood Stream Infections ICU Blood Stream Infection		Summar ICU Class Compara Organisa Year Limit rep Denomin Frequen Bacterae	isation Type elification ator ation port to hator cy emia Category	Rate   Rate Rate Rate Rate Rate Rate Rate Rat	ity Agency  ity Agency  sys (per 1,000)	▼.
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Organisation Name	Code	Apr-2021	May-2021	Jun-2021	Jul-2021	Aug-2021	Sep-2021	Oct-2021	Nov-2021	Dec-2021	Jan-2022	Feb-2022	Mar-2022
Org A	Code A	5.93	4.10	7.42	5.49	10.40	7.53	6.17	7.08	8.04	1.98		
Org B	Code B	2.38	0.42	0.89	2.89	3.42	1.94	2.73	1.28	1.31			

Regardless of the 'Chart Type' parameter selected (Bar Chart or Dot Plot) the report output is also presented in table format underneath the generated data chart. Data are presented by Organisation (name and code) as well as month (<u>Figure 5</u>).

Organisation Name	Code	Apr-2020	May-2020	Jun-2020	Jul-2020	Aug-2020	Sep-2020	Oct-2020	Nov-2020	Dec-2020	Jan-2021	Feb-2021	Mar-2021
ICU A	ICA	24.31	13.08	8.39									
ICU B	ICB	23.38	24.48	34.09									
ICU C	ісс	8.29	5.74	17.24									
ICU D	ICD	22.18	8.09	14.49									

### Figure 5: ICU Benchmarking Dashboard Output (Table)

After running the Benchmarking Report with your selected parameters you can export the output by clicking the small disk icon above the graph (Figure 6). This provides a drop-down menu with a choice of file formats (Word, Excel, PDF or CSV (comma delimited). Click the format of your choice and follow the dialogue boxes to save the report.

### Figure 6: Data Quality Dashboard 'Export Button'

Drganism	ACHROMOBACTER SPECIES, ACII	eraemia Category   -All-	
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	king	Word	
	niiy	Excel	
	Rate of ICU Blood Stream Infectio	PDF	
8.00		CSV (comma delimited)	

# About the UK Health Security Agency

The UK Health Security Agency is an executive agency, sponsored by the <u>Department</u> of <u>Health and Social Care</u>.

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