icnarc | intensive care national audit & research centre

case mix programme

Quarterly Quality Report

Salford Royal Hospital, Critical Care Directorate

1 April 2023 to 30 June 2023

(N=479)

Date of report: 10/10/2023

Recent changes

New information

- About the data in this report

New quality indicators

- Potential mis-triage to the ward
- Delayed admission

New analysis

- Distribution of National Early Warning Score (NEWS2)
- Cumulative distribution of time from decision to admit until admission
- Cumulative distribution of time from decision to discharge until actual discharge
- Risk-adjusted acute hospital mortality (by predicted risk)
- Mean length of stay

Analysis update

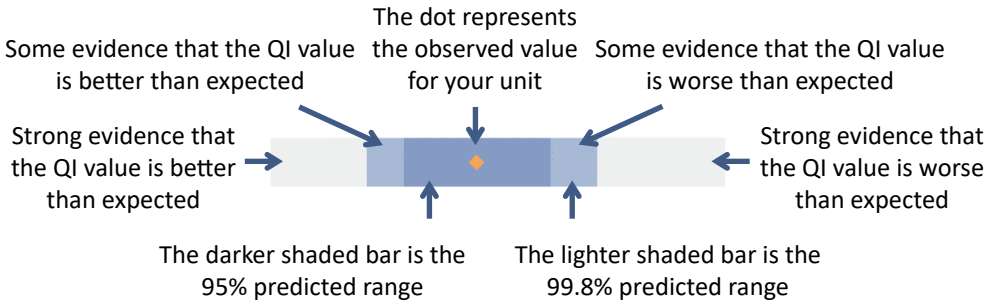
- Latest risk model (ICNARC$_{H-2023}$ model)
- Data completeness highlighted and analysis not shown when <60%
- High-risk admissions based on National Early Warning Score (NEWS2)

Understanding your report

Quality indicators – expected value and predicted range

In this report, your unit's observed value for each quality indicator (QI) is compared against an expected value. For most QIs, the expected value is the overall percentage/rate for all CMP units for the time period of the report. For risk-adjusted mortality, the expected value is the expected mortality from the ICNARC$_{H-2023}$ model, calculated as the mean predicted risk of death for all eligible admissions to your unit.

To compare the observed value with the expected value, we calculate predicted ranges based on the expected value and the number of eligible admissions (or bed days for rates) for your unit. We expect a unit's observed value to lie within the 95% predicted range 19 times out of 20 and within the 99.8% predicted range 998 times out of 1000.

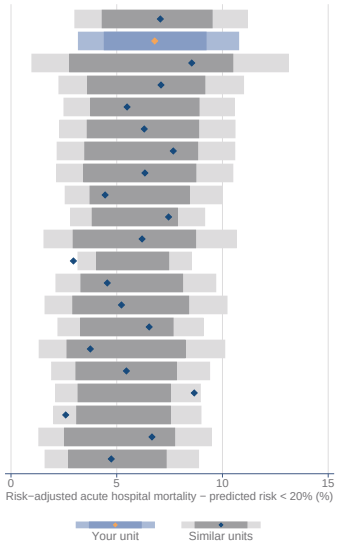


Quality indicator dashboard page

The quality indicator dashboard summarises all your unit's QI results on one page, taking each result and displaying these all together, each accompanied by a traffic light rating:

- The observed value is within or below the 95% predicted range — there is no evidence that the QI value is worse than expected
- The observed value is above the 95% predicted range but within the 99.8% predicted range — there is some evidence that the QI value is worse than expected
- The observed value is above the 99.8% predicted range — there is strong evidence that the QI value is worse than expected

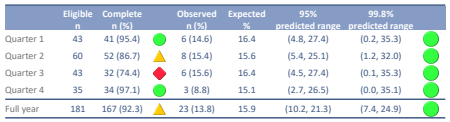
Quality indicator pages



Each QI has its own page and is presented as a tornado plot with a definition, a quarterly results table and a trend graph.

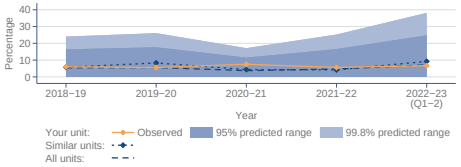
The tornado plot shows the observed value for your unit against the 95% and 99.8% reference ranges, compared with the equivalent for units with a similar admission profile to your unit ('similar units').

For risk-adjusted indicators, the bars are ordered by expected value, with the unit with the highest expected value at the top. For other QIs, the bars are ordered by the number of eligible admissions/bed days, with the unit with the largest number at the top. Bars are replaced with explanatory text where units have fewer than 10 complete eligible admissions or less than 60% of eligible admissions complete.



	Eligible n	Complete n (%)		Observed n (%)	Expected %	95% predicted range	99.8% predicted range	
Quarter 1	43	41 (95.4)	●	6 (14.6)	16.4	(4.8, 27.4)	(0.2, 35.3)	●
Quarter 2	60	52 (86.7)	▲	8 (15.4)	15.6	(5.4, 25.1)	(1.2, 32.0)	●
Quarter 3	43	32 (74.4)	◆	6 (15.6)	16.4	(4.5, 27.4)	(0.1, 35.3)	●
Quarter 4	35	34 (97.1)	●	3 (8.8)	15.1	(2.7, 26.5)	(0.0, 35.1)	●
Full year	181	167 (92.3)	▲	23 (13.8)	15.9	(10.2, 21.3)	(7.4, 24.9)	●

The quarterly results table shows the breakdown of results for each quarter during the current year. The first traffic light ratings refer to the data completeness, where ⛔ indicates <60% complete, ◆ 60 to <80% complete, ▲ 80 to <95% complete and ● ≥95% complete. A unit must have at least 10 complete eligible admissions, and data must be at least 60% complete, to be included in each QI. The second traffic light ratings are reported for each quarter in the same way as for the dashboard page.



The trend graph shows the observed value for your unit and the 95% and 99.8% reference ranges over the last 5 years, compared with the observed values for units with a similar admission profile and for all units in the CMP.

For more information regarding the QQR, please visit the ICNARC QQR webpage.

About the data in this report

Your unit

This report is based on data for 479 admissions to your unit of 454 patients from 1 April 2023 to 30 June 2023.

	Number of admissions	Number of admissions excluding readmissions*	Number of beds†	Available bed-days§
Quarter 1	479	452	32	2912
Quarter 2				
Quarter 3				
Quarter 4				
Year to date	479	452	32	2912

* Excluding readmissions of the same patient within the same acute hospital stay
† Maximum number of operational beds within your unit, as reported to CMP
§ Calculated as Number of beds x total number of calendar days in quarter/full year

Similar units

In this report, results for your unit are compared with those for units with a similar admission profile to your unit ('similar units').

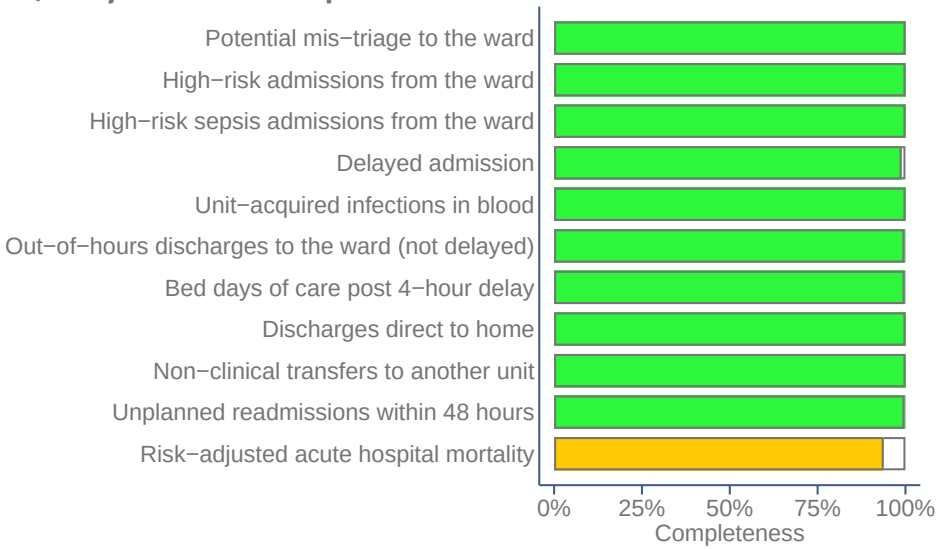
Similar units are other adult general critical care units that are similar to your unit in:

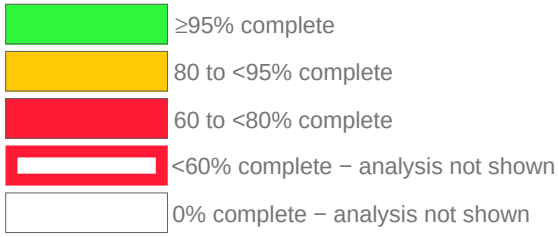
- number of admissions;
- proportion of surgical admissions;
- proportions of admissions under particular specialties;
- and proportion of Level 3 bed-days provided.

This report includes data for 4141 admissions to 10 similar units.

For more information, see Selecting units with a similar admission profile for the CMP Quarterly Quality Report.

Quality indicator completeness

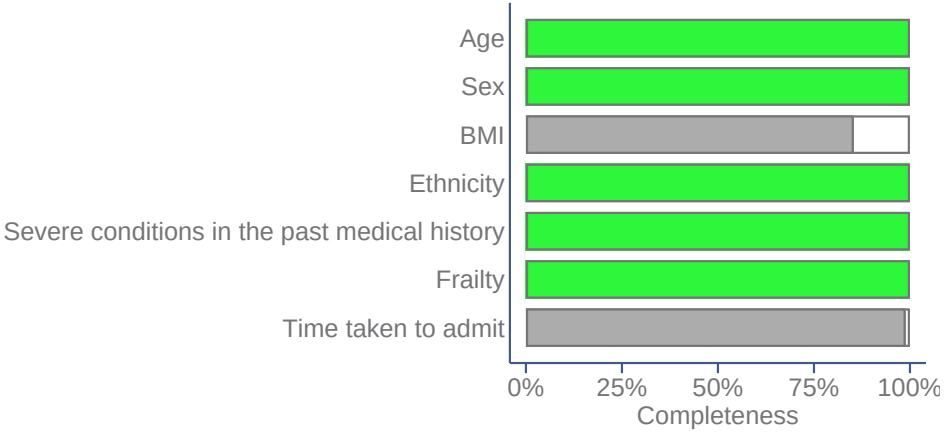




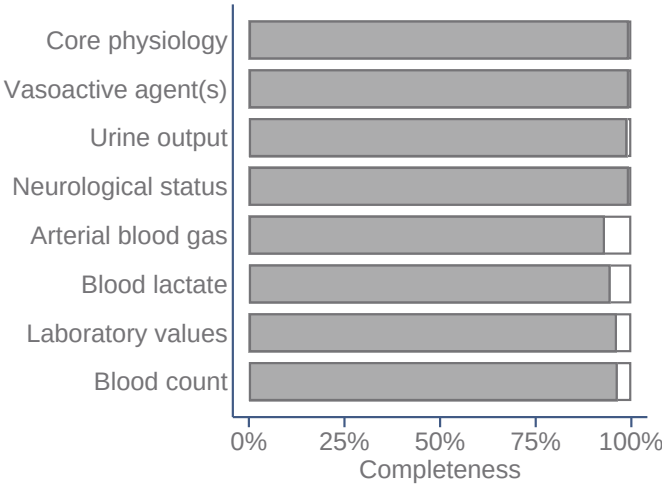
If your completeness for any quality indicator is less than 95%, this should be investigated due to the potential impact on the analysis.

Data completeness

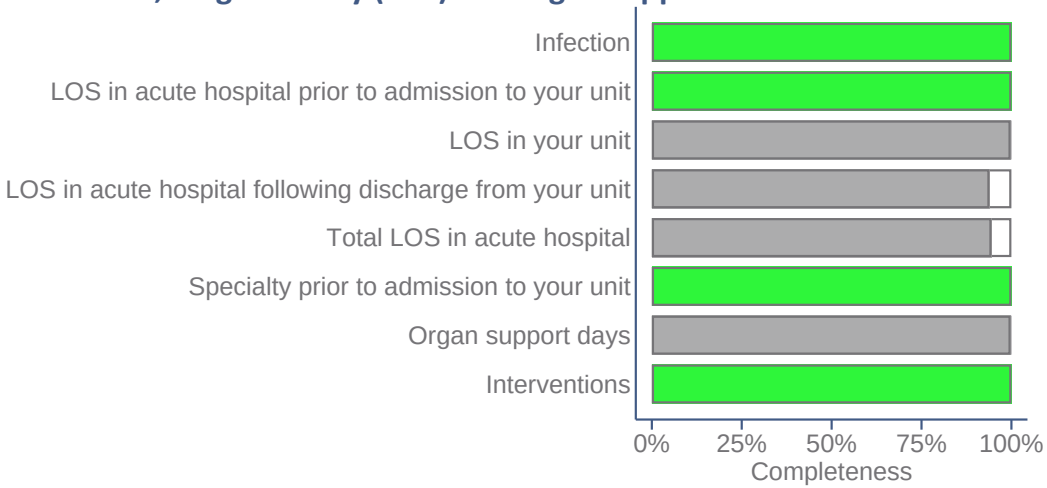
Case mix

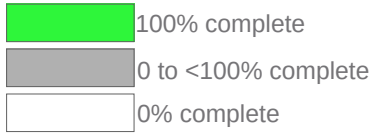


Physiology

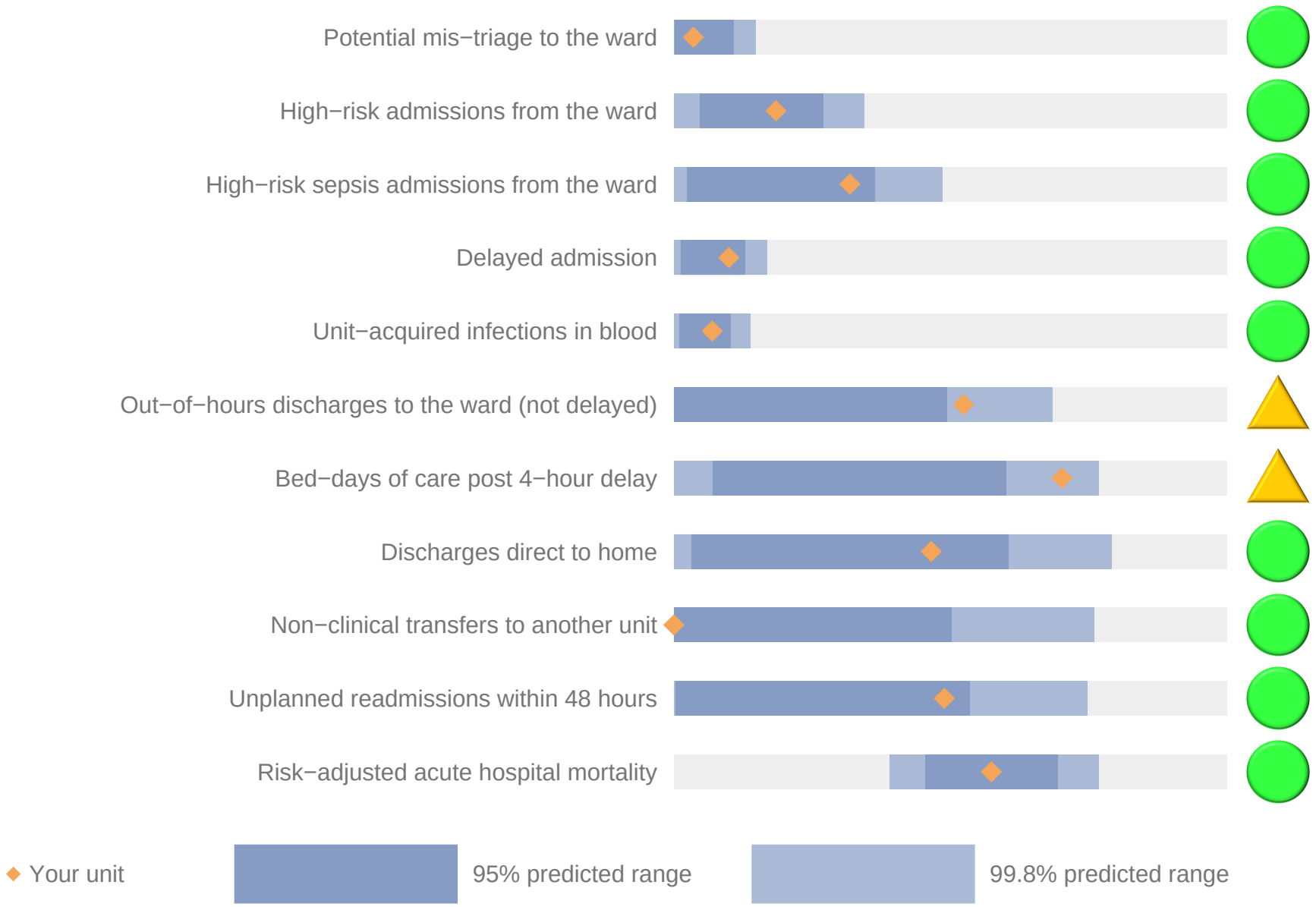


Infection, length of stay (LOS) and organ support

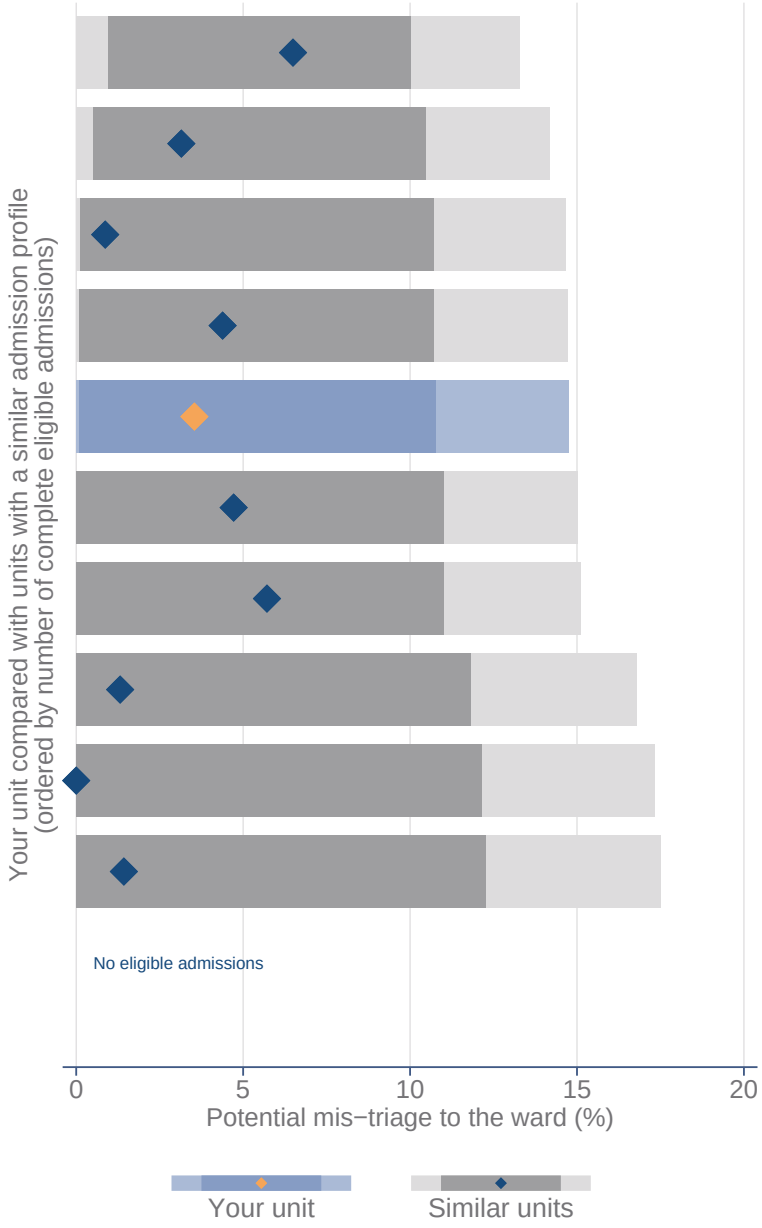




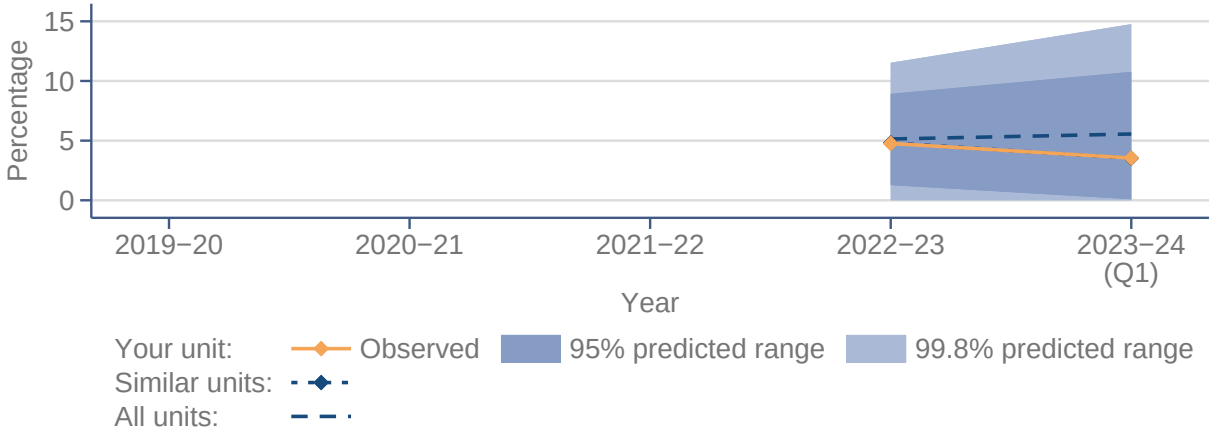
Quality indicator dashboard



Potential mis-triage to the ward



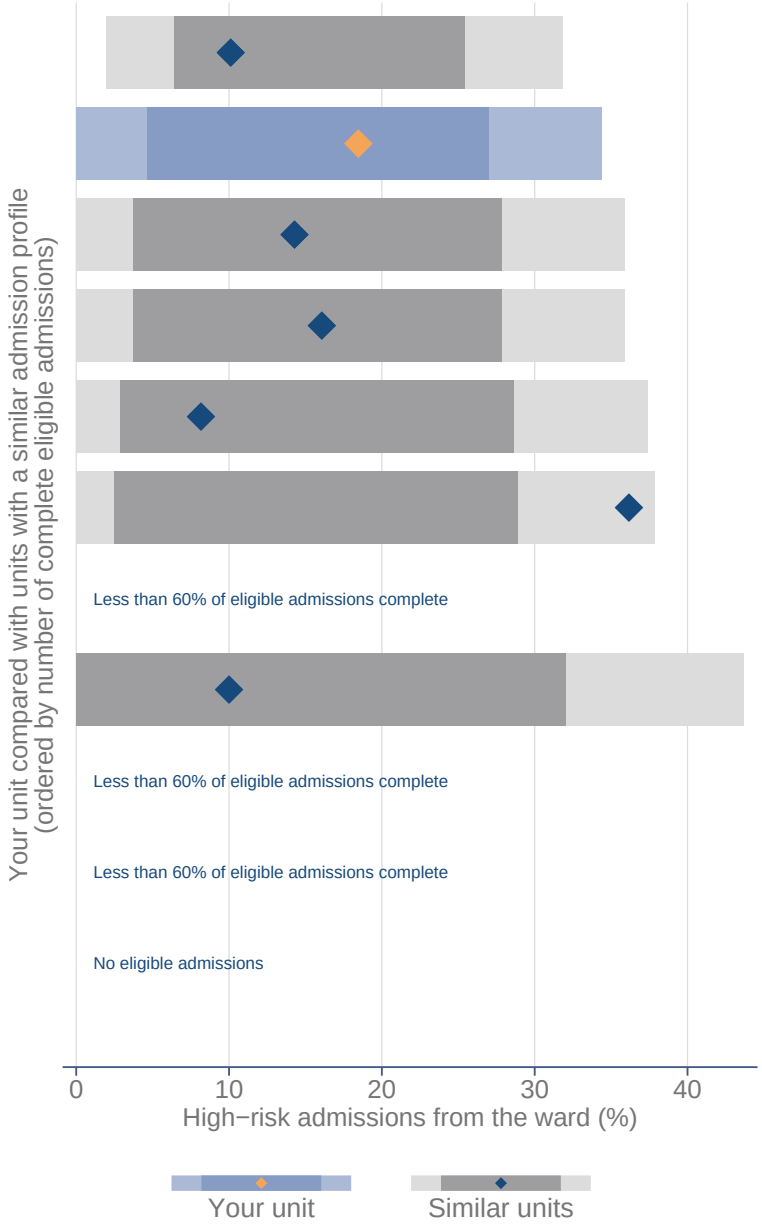
	Eligible n	Complete n (%)		Observed n (%)	Expected %	95% predicted range	99.8% predicted range	
Quarter 1	113	113 (100.0)	●	4 (3.5)	5.6	(0.1, 10.8)	(0.0, 14.8)	●
Quarter 2								
Quarter 3								
Quarter 4								
Year to date	113	113 (100.0)	●	4 (3.5)	5.6	(0.1, 10.8)	(0.0, 14.8)	●



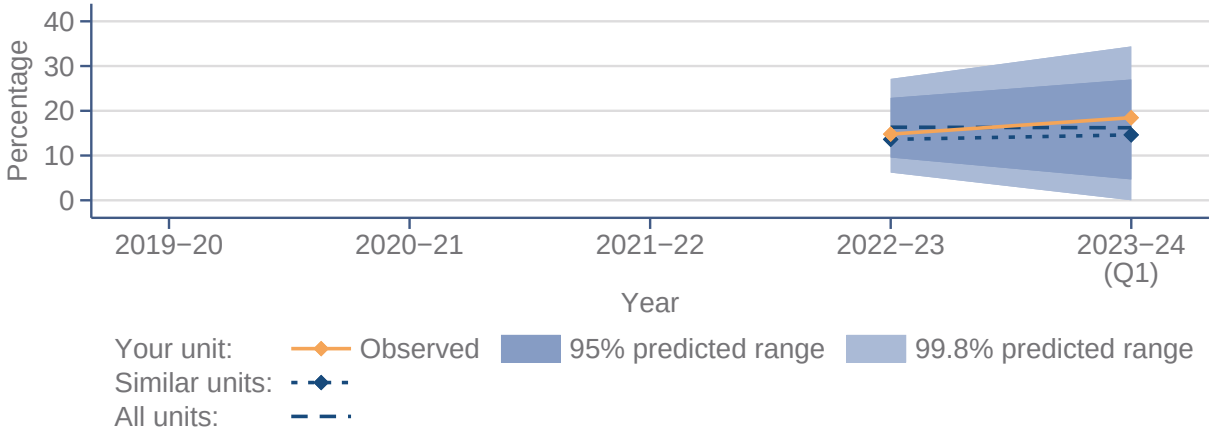
Definition

- Eligible: Unplanned critical care unit admissions, admitted to your hospital via your ED, and admitted to critical care within 8 hours of admission to hospital, excluding admissions from theatre or critical care
- Complete: The number and percentage of eligible admissions with complete data for hospital/unit admission
- Observed percentage: The number and percentage of complete eligible admissions from a ward (or an emergency admissions unit, intermediate care or obstetrics)
- Expected percentage: The overall percentage of potential mis-triage to the ward across all critical care units participating in the CMP
- Predicted range: We expect a unit's observed percentage to lie within the 95% predicted range 19 times out of 20 and within the 99.8% predicted range 998 times out of 1000
- This QI is only available from version 4.0 onwards

High-risk admissions from the ward



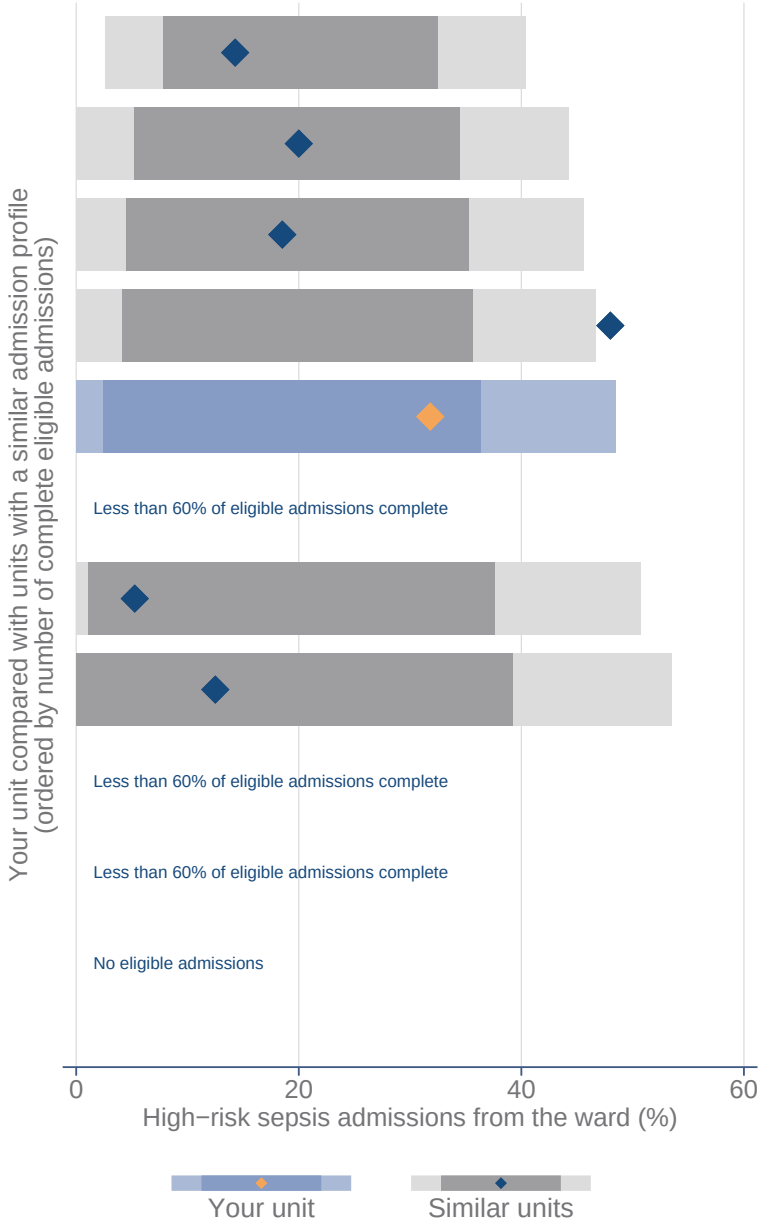
	Eligible n	Complete n (%)		Observed n (%)	Expected %	95% predicted range	99.8% predicted range	
Quarter 1	65	65 (100.0)	●	12 (18.5)	16.2	(4.7, 27.0)	(0.0, 34.4)	●
Quarter 2								
Quarter 3								
Quarter 4								
Year to date	65	65 (100.0)	●	12 (18.5)	16.2	(4.7, 27.0)	(0.0, 34.4)	●



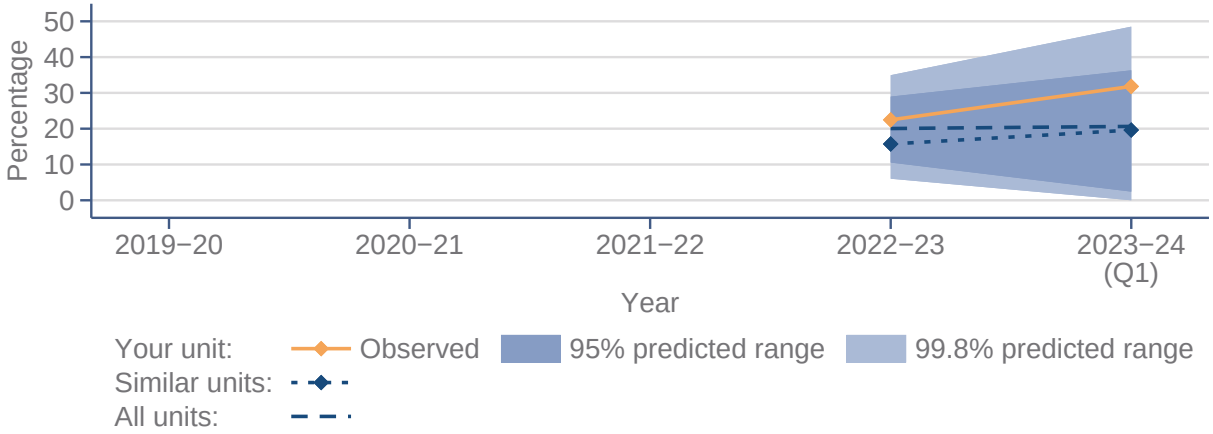
Definition

- Eligible: Critical care unit admissions from a ward (or an emergency admissions unit, intermediate care or obstetrics) in your hospital
- Complete: The number and percentage of eligible admissions with complete data for in-hospital observations prior to referral for critical care expertise
- Observed percentage: The number and percentage of complete eligible admissions with a National Early Warning Score (NEWS2) prior to admission of 10 or more
- Expected percentage: The overall percentage of high-risk admissions from the ward across all critical care units participating in the CMP
- Predicted range: We expect a unit's observed percentage to lie within the 95% predicted range 19 times out of 20 and within the 99.8% predicted range 998 times out of 1000
- This QI is only available from version 4.0 onwards

High-risk sepsis admissions from the ward



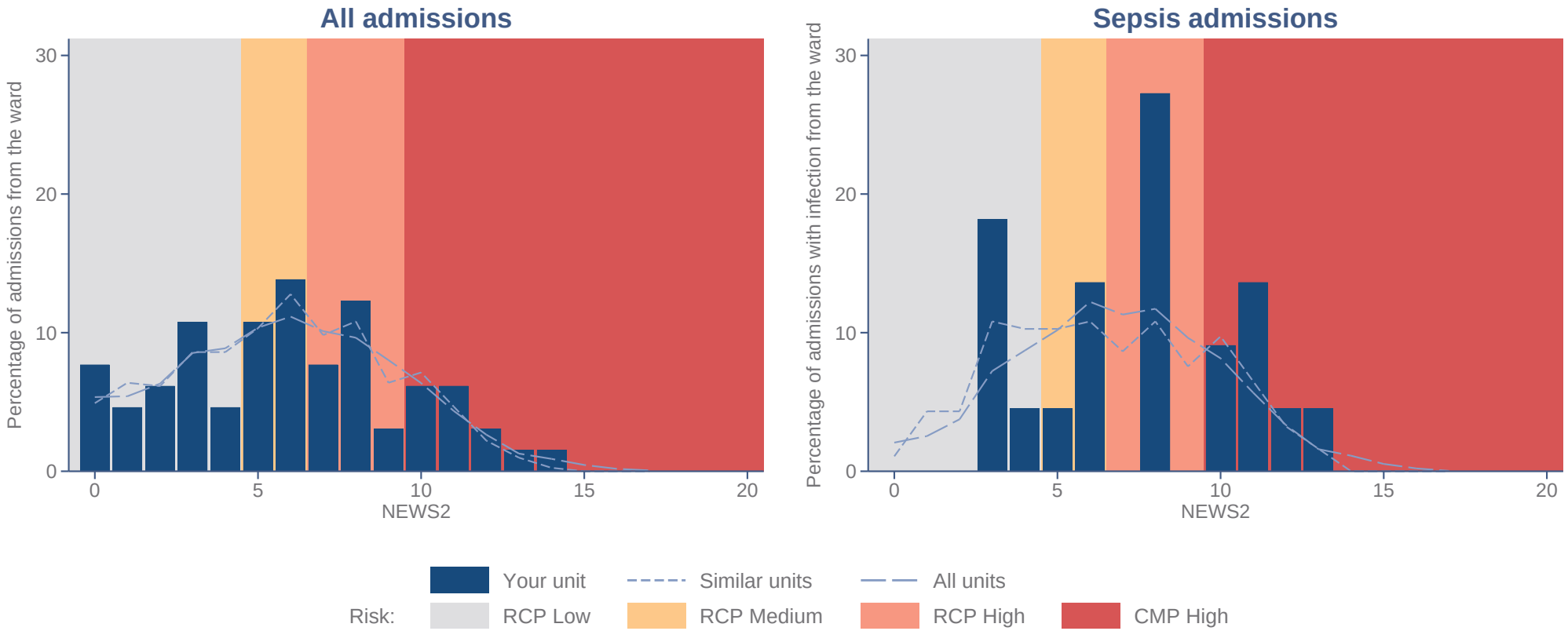
	Eligible n	Complete n (%)		Observed n (%)	Expected %	95% predicted range	99.8% predicted range	
Quarter 1	22	22 (100.0)	●	7 (31.8)	20.6	(2.4, 36.3)	(0.0, 48.5)	●
Quarter 2								
Quarter 3								
Quarter 4								
Year to date	22	22 (100.0)	●	7 (31.8)	20.6	(2.4, 36.3)	(0.0, 48.5)	●



Definition

- Eligible: Critical care unit admissions with infection from a ward (or an emergency admissions unit, intermediate care or obstetrics) in your hospital
- Complete: The number and percentage of eligible admissions with complete data for in-hospital observations prior to referral for critical care expertise
- Observed percentage: The number and percentage of complete eligible admissions with a National Early Warning Score (NEWS2) prior to admission of 10 or more
- Expected percentage: The overall percentage of high-risk sepsis admissions from the ward across all critical care units participating in the CMP
- Predicted range: We expect a unit's observed percentage to lie within the 95% predicted range 19 times out of 20 and within the 99.8% predicted range 998 times out of 1000
- This QI is only available from version 4.0 onwards

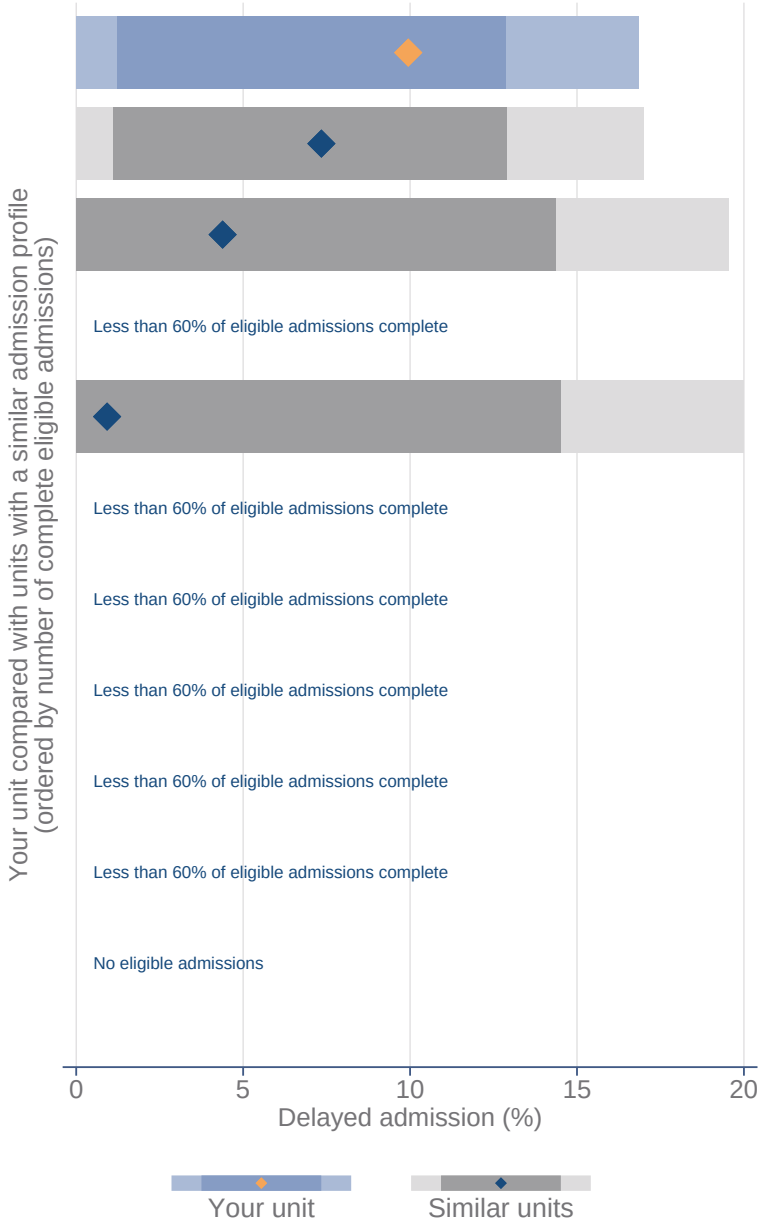
High-risk admissions from the ward - NEWS2 distribution



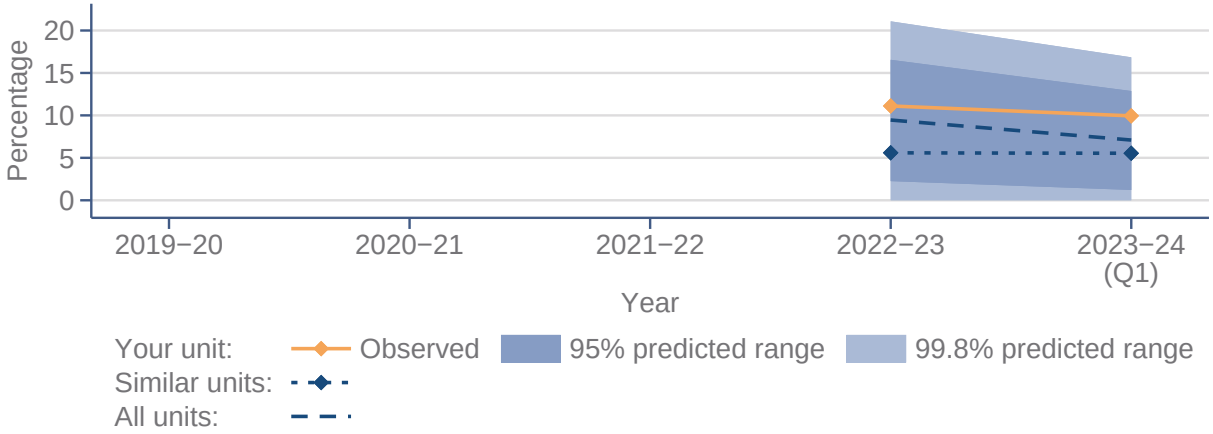
Explanation

- The distribution plots show the percentage of all admissions from the ward (left) and percentage of admissions with infection from the ward (right) with each National Early Warning Score (NEWS2) value, based on the last in-hospital set of observations prior to referral for critical care expertise
- Distributions are shown for your unit (bars) compared with similar units and all units (lines)
- Shading behind the plot shows risk categories
- Royal College of Physicians (RCP) Low, Medium and High correspond to the NEWS2 thresholds from the RCP NEWS2 Final Report
- CMP High corresponds to the definition of *High-risk admissions from the ward* and *High-risk sepsis admissions from the ward* used in this report - NEWS2 prior to admission of 10 or more

Delayed admission



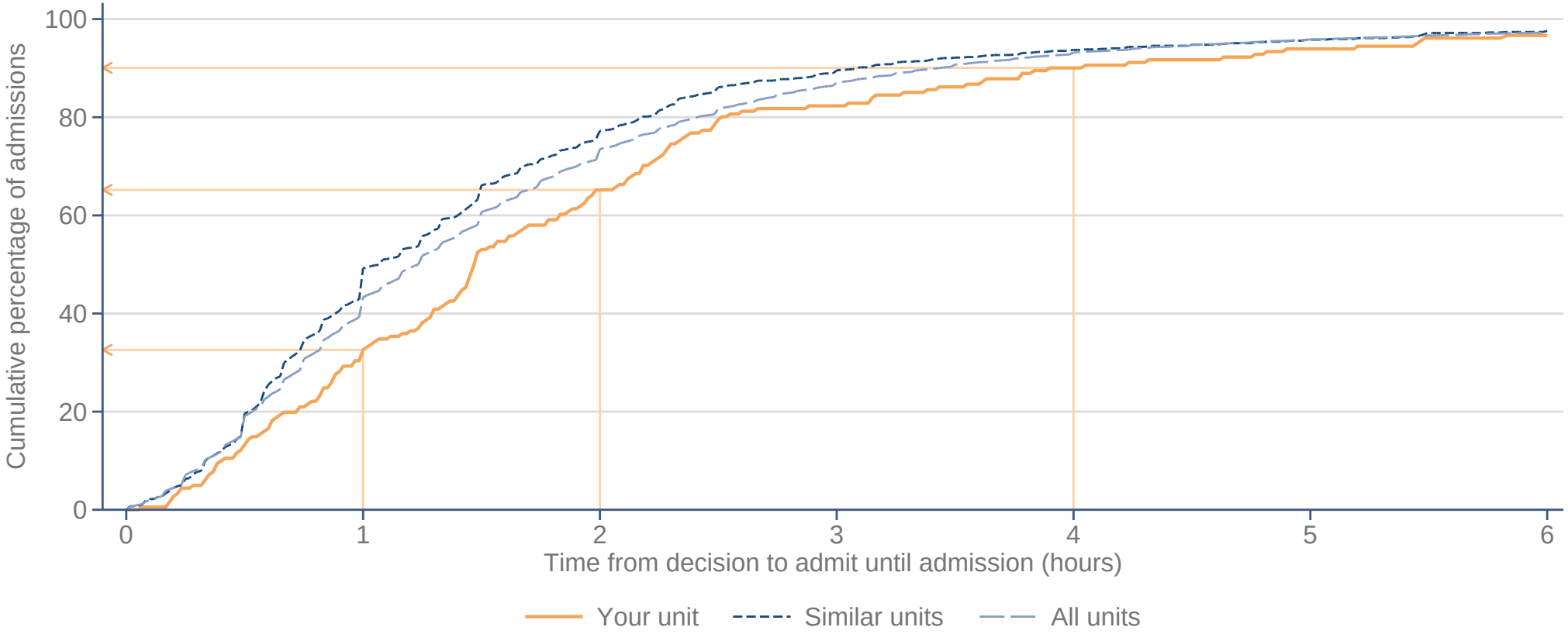
	Eligible n	Complete n (%)		Observed n (%)	Expected %	95% predicted range	99.8% predicted range	
Quarter 1	183	181 (98.9)	●	18 (9.9)	7.1	(1.2, 12.9)	(0.0, 16.8)	●
Quarter 2								
Quarter 3								
Quarter 4								
Year to date	183	181 (98.9)	●	18 (9.9)	7.1	(1.2, 12.9)	(0.0, 16.8)	●



Definition

- Eligible: Critical care unit admissions from any location in your hospital other than theatre or critical care
- Complete: The number and percentage of eligible admissions with complete data for date/time of decision to admit to your unit
- Observed percentage: The number and percentage of complete eligible admissions admitted to your unit more than 4 hours following the date/time of decision to admit
- Expected percentage: The overall percentage of delayed admissions across all critical care units participating in the CMP
- Predicted range: We expect a unit's observed percentage to lie within the 95% predicted range 19 times out of 20 and within the 99.8% predicted range 998 times out of 1000
- This QI is only available from version 4.0 onwards

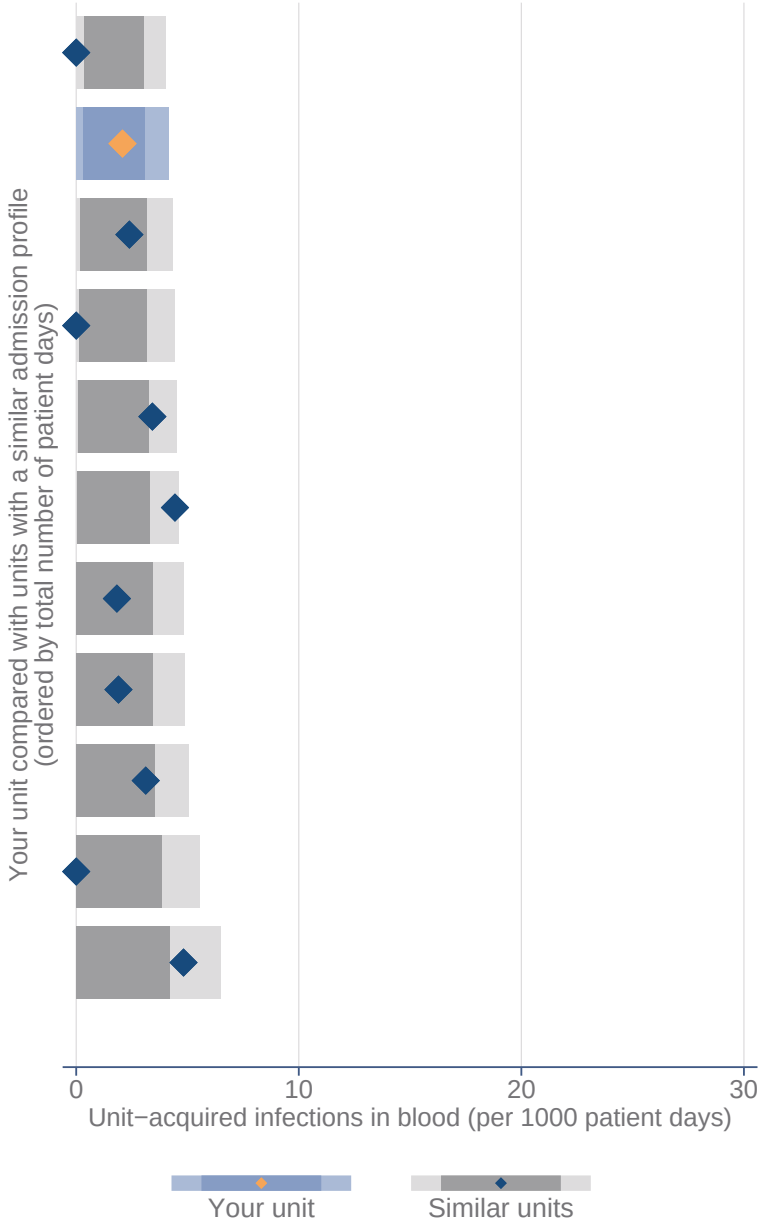
Cumulative distribution of time from decision to admit until admission



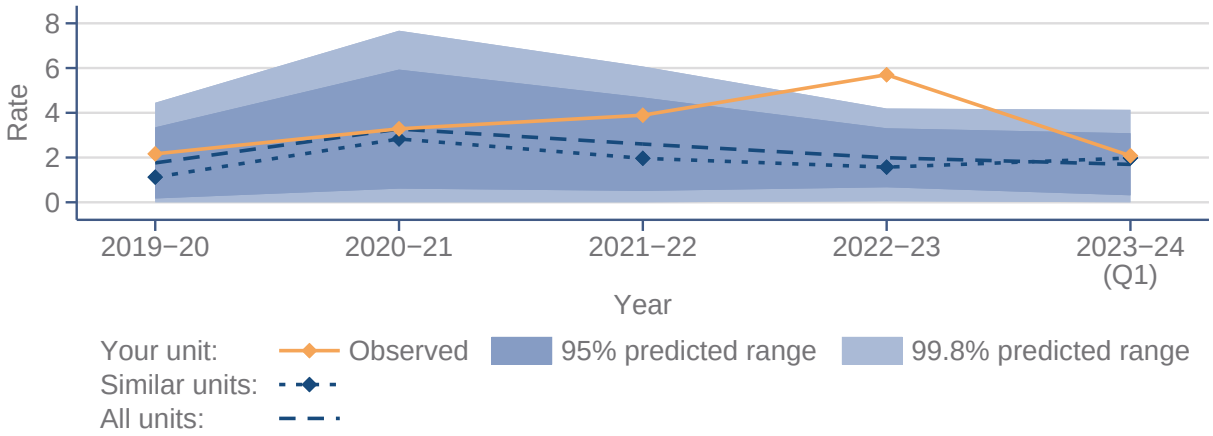
Explanation

- The cumulative distribution plot shows the percentage of admissions by the time in hours from the date/time of the decision to admit to your unit to the date/time of admission for all admissions from a location within your hospital (other than theatre or another critical care unit) with a date/time of decision to admit to your unit recorded. A higher line is better, indicating that more admissions/discharges occurred within the time indicated
- Distributions are shown for your unit compared with similar units and all units
- The dropped lines at 1, 2 and 4 hours show the percentage of admissions admitted to your unit within 1, 2 and 4 hours of decision to admit, respectively

Unit-acquired infections in blood



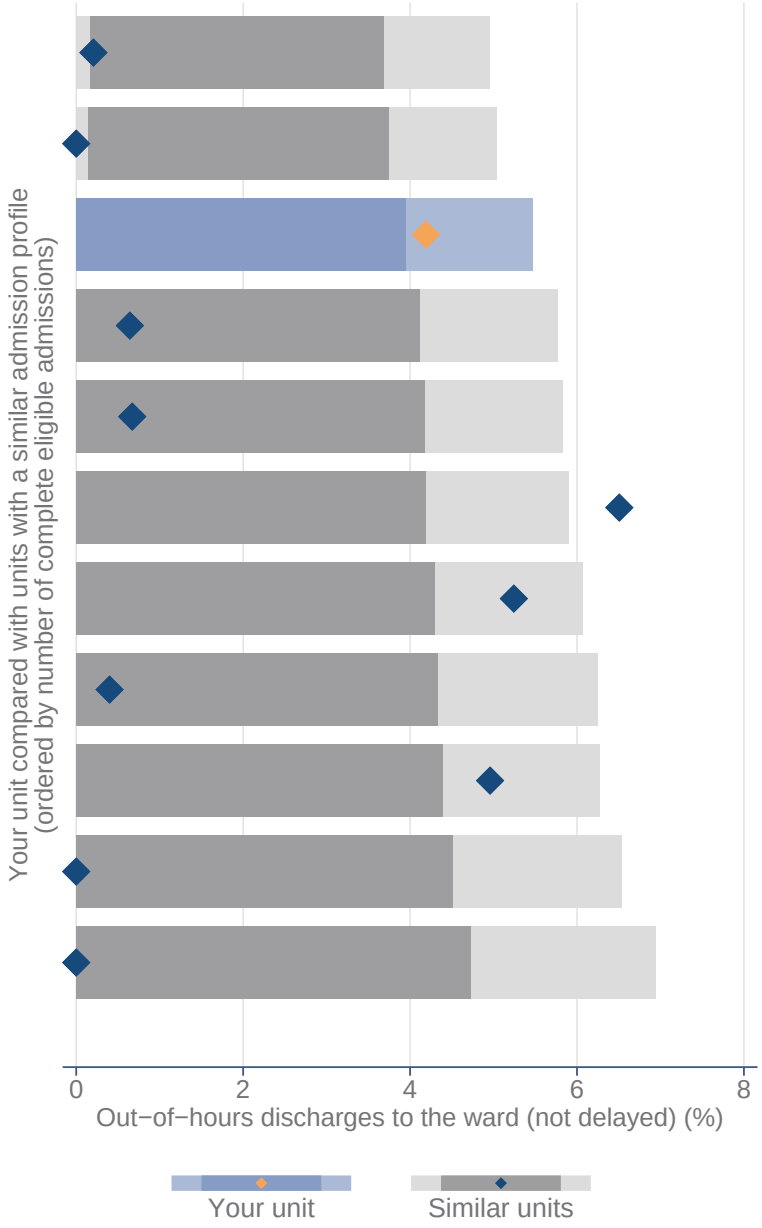
	Eligible n	Complete n (rate)		Observed n (rate)	Expected rate	95% predicted range	99.8% predicted range	
Quarter 1	364	364 (100.0)	●	7 (2.1)	1.7	(0.3, 3.1)	(0.0, 4.1)	●
Quarter 2								
Quarter 3								
Quarter 4								
Year to date	364	364 (100.0)	●	7 (2.1)	1.7	(0.3, 3.1)	(0.0, 4.1)	●



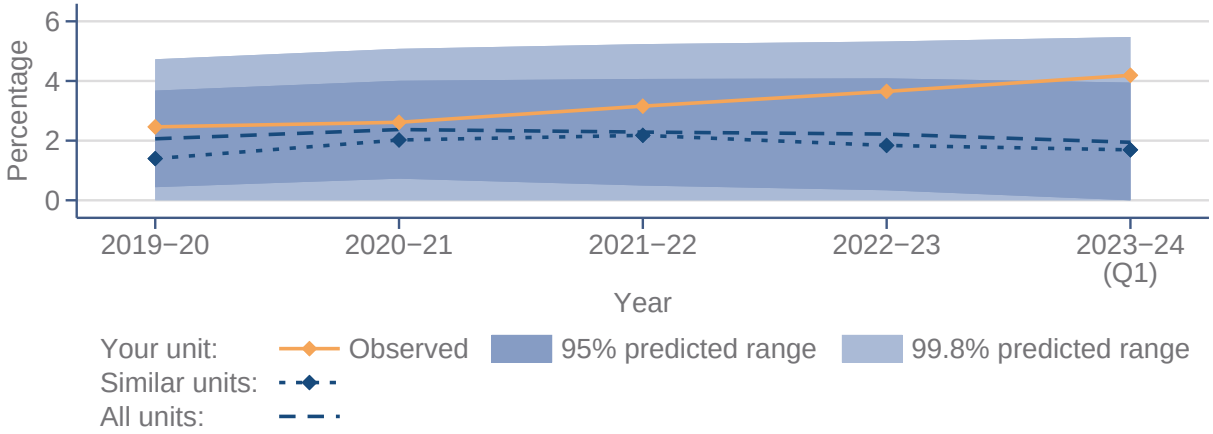
Definition

- Eligible: Critical care unit admissions staying more than 48 hours
- Complete: The number and percentage of eligible admissions with complete data for unit-acquired infection
- Observed rate: The number of admissions with presence of infection in any blood sample taken for microbiological culture after 48 hours following admission and rate per 1000 patient days (number of admissions divided by the total number of patient days that eligible admissions stayed in the critical care unit, multiplied by 1000)
- Expected rate: The overall rate of unit-acquired infections in blood per 1000 patient days across all critical care units participating in the CMP
- Predicted range: We expect a unit's observed rate to lie within the 95% predicted range 19 times out of 20 and within the 99.8% predicted range 998 times out of 1000

Out-of-hours discharges to the ward (not delayed)



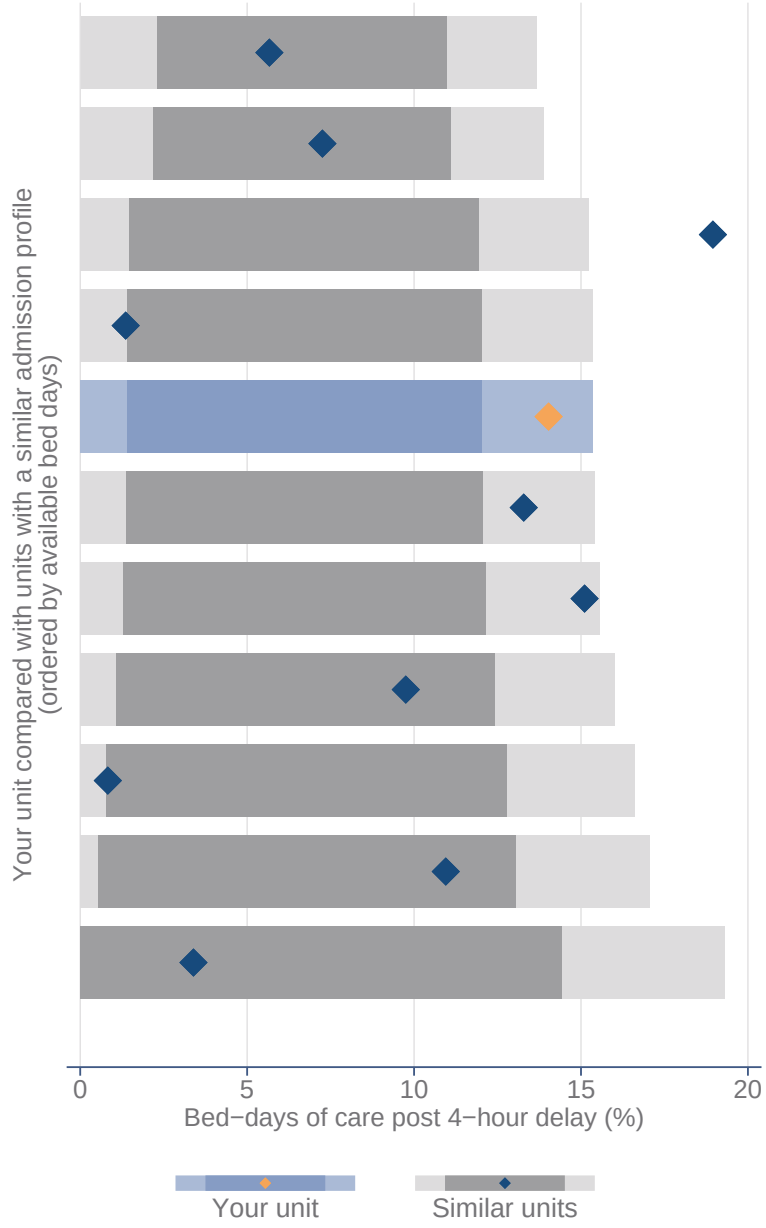
	Eligible n	Complete n (%)		Observed n (%)	Expected %	95% predicted range	99.8% predicted range	
Quarter 1	359	358 (99.7)	●	15 (4.2)	1.9	(0.0, 3.9)	(0.0, 5.5)	▲
Quarter 2								
Quarter 3								
Quarter 4								
Year to date	359	358 (99.7)	●	15 (4.2)	1.9	(0.0, 3.9)	(0.0, 5.5)	▲



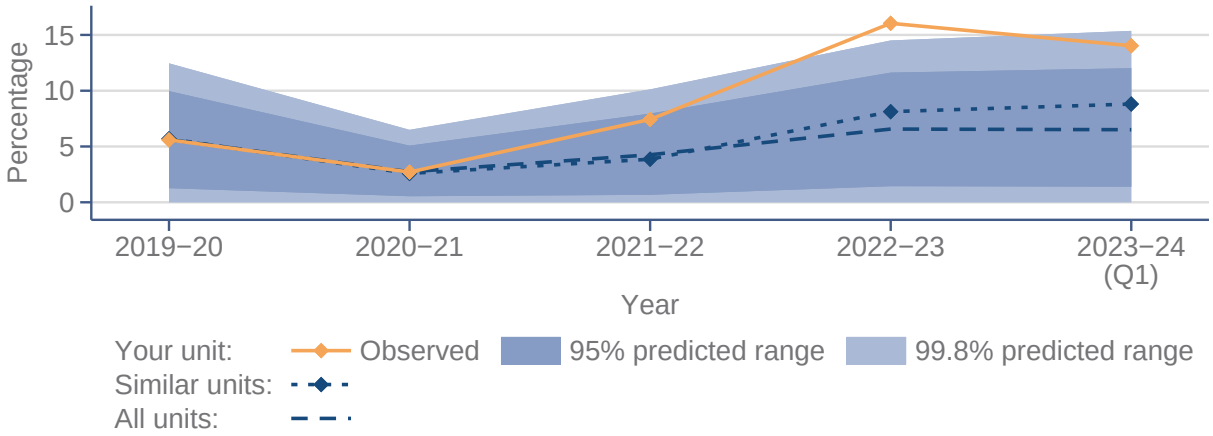
Definition

- Eligible: Critical care unit survivors discharged to a non-critical care location in your hospital
- Complete: The number and percentage of eligible admissions with complete data for date/time of discharge from your unit
- Observed percentage: The number and percentage of complete eligible admissions discharged between 22:00 and 06:59 and not delayed (i.e. decision to discharge not made before 18:00 on that day)
- Expected percentage: The overall percentage of out-of-hours discharges to the ward (not delayed) across all critical care units participating in the CMP
- Predicted range: We expect a unit's observed percentage to lie within the 95% predicted range 19 times out of 20 and within the 99.8% predicted range 998 times out of 1000

Bed-days of care post 4-hour delay



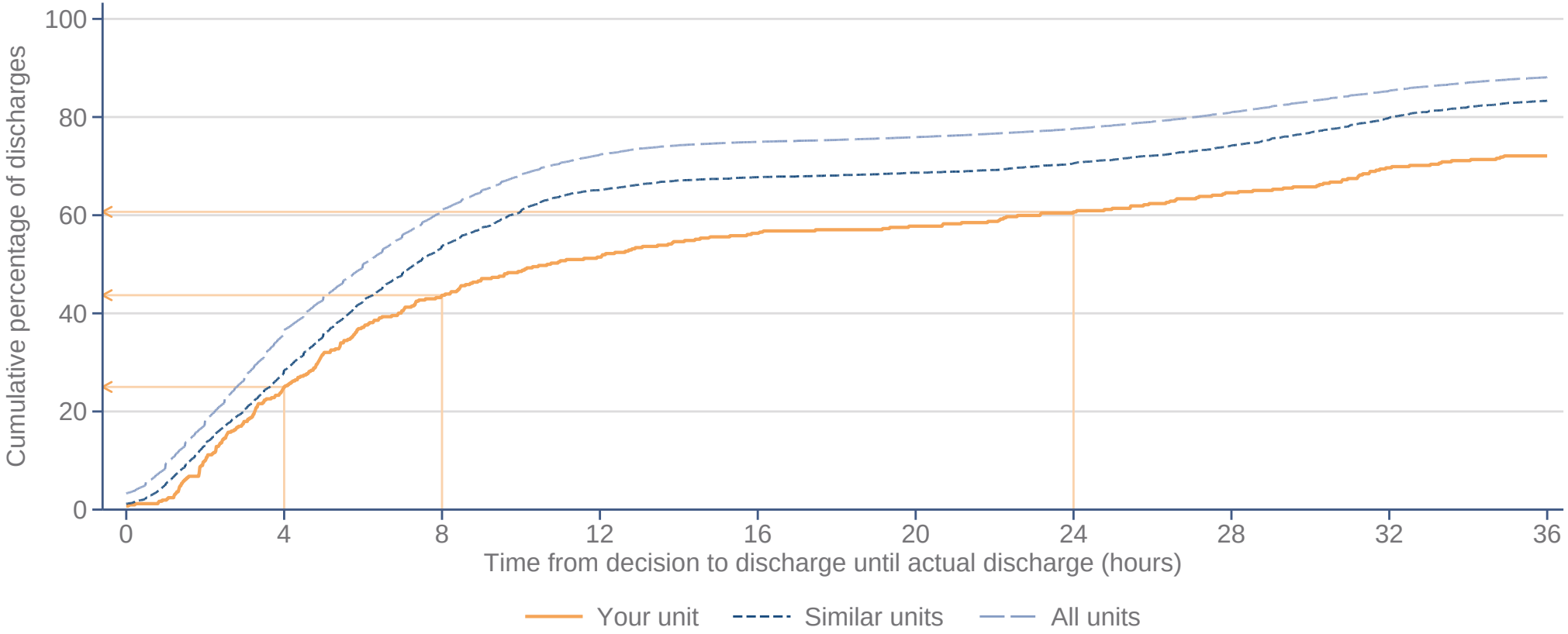
	Eligible n	Complete n (%)		Observed n (%)	Expected %	95% predicted range	99.8% predicted range	
Quarter 1	404	403 (99.8)	●	409 (14.0)	6.5	(1.4, 12.0)	(0.0, 15.4)	▲
Quarter 2								
Quarter 3								
Quarter 4								
Year to date	404	403 (99.8)	●	409 (14.0)	6.5	(1.4, 12.0)	(0.0, 15.4)	▲



Definition

- Eligible: Critical care unit survivors discharged to a non-critical care location in your hospital or to a location not in acute hospital
- Complete: The number and percentage of eligible admissions with complete data for date/time of decision to discharge (or early discharge)
- Observed percentage: The number and percentage of all available bed days in the critical care unit occupied by complete eligible admissions more than 4 hours after the date/time of decision to discharge
- Expected percentage: The overall percentage of bed days of care post 4-hour delay across all critical care units participating in the CMP
- Predicted range: We expect a unit's observed percentage to lie within the 95% predicted range 19 times out of 20 and within the 99.8% predicted range 998 times out of 1000

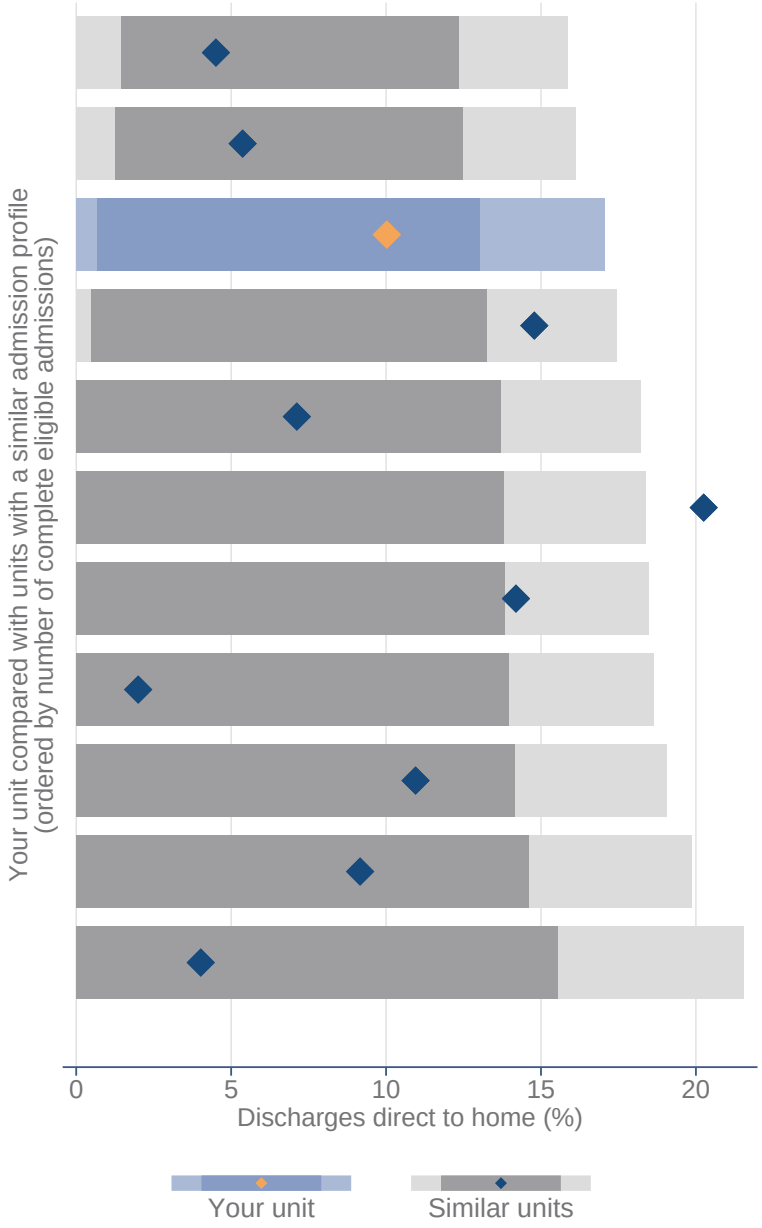
Cumulative distribution of time from decision to discharge until actual discharge



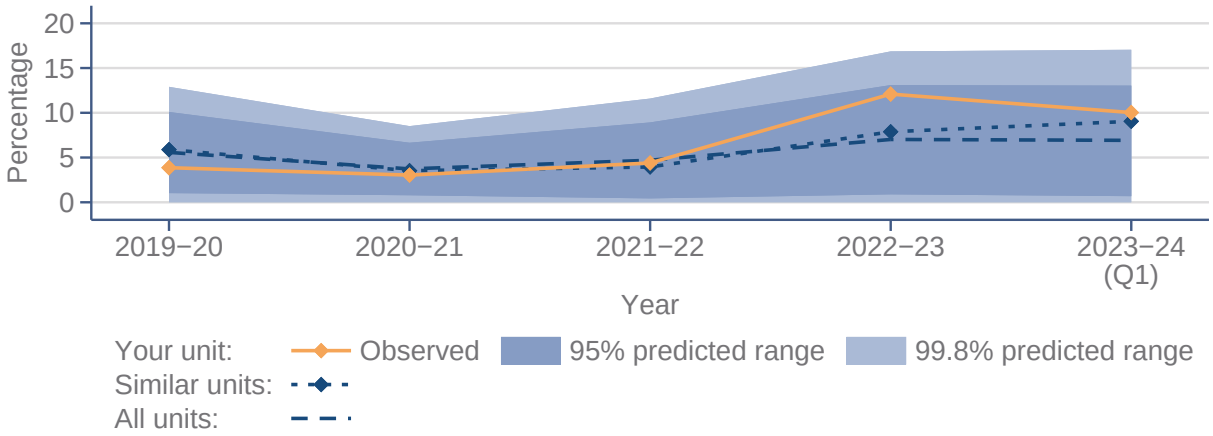
Explanation

- The cumulative distribution plot shows the percentage of discharges by the time in hours from the date/time of the decision to discharge from your unit to the date/time of discharge. A higher line is better, indicating that more admissions/discharges occurred within the time indicated
- Discharges that were reported as 'early' are assigned a time of zero hours from decision to discharge until discharge
- Distributions are shown for your unit compared with similar units and all units
- The dropped lines at 4, 8 and 24 hours show the percentage of discharges from your unit within 4, 8 and 24 hours of the decision to discharge, respectively

Discharges direct to home



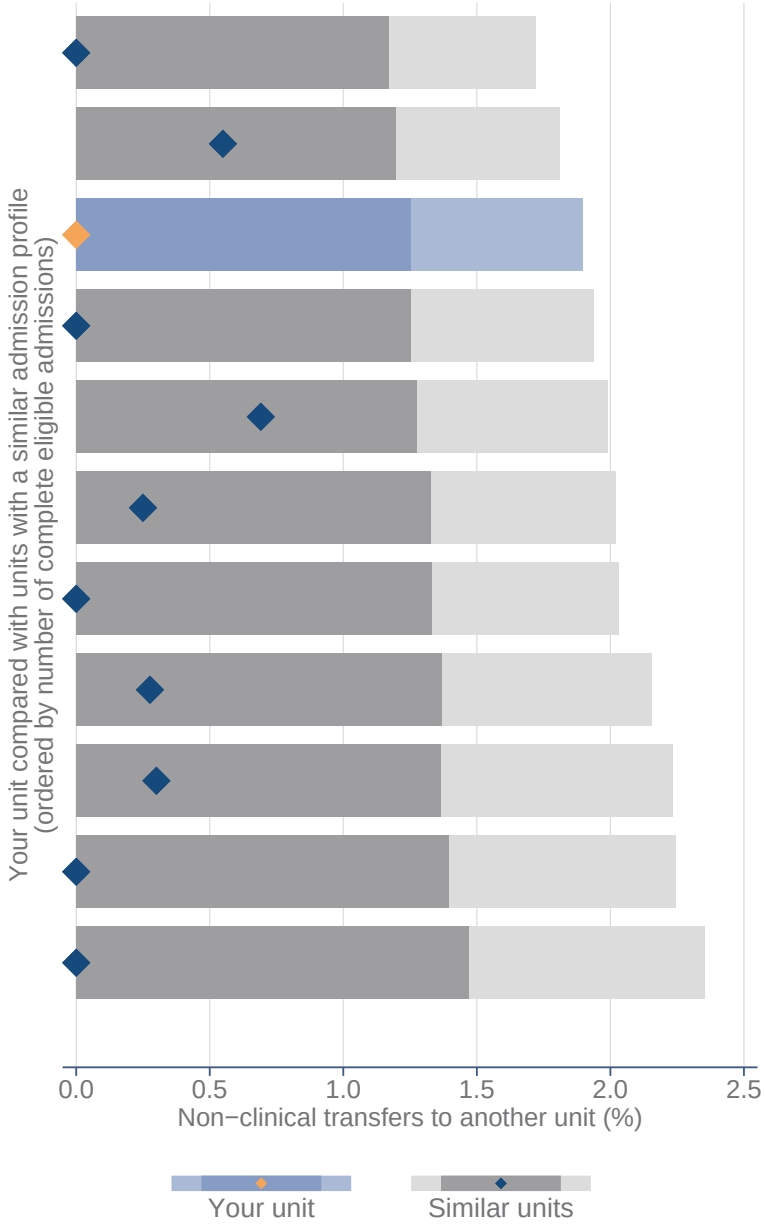
	Eligible n	Complete n (%)		Observed n (%)	Expected %	95% predicted range	99.8% predicted range	
Quarter 1	404	404 (100.0)	●	40 (10.0)	6.9	(0.7, 13.0)	(0.0, 17.0)	●
Quarter 2								
Quarter 3								
Quarter 4								
Year to date	404	404 (100.0)	●	40 (10.0)	6.9	(0.7, 13.0)	(0.0, 17.0)	●



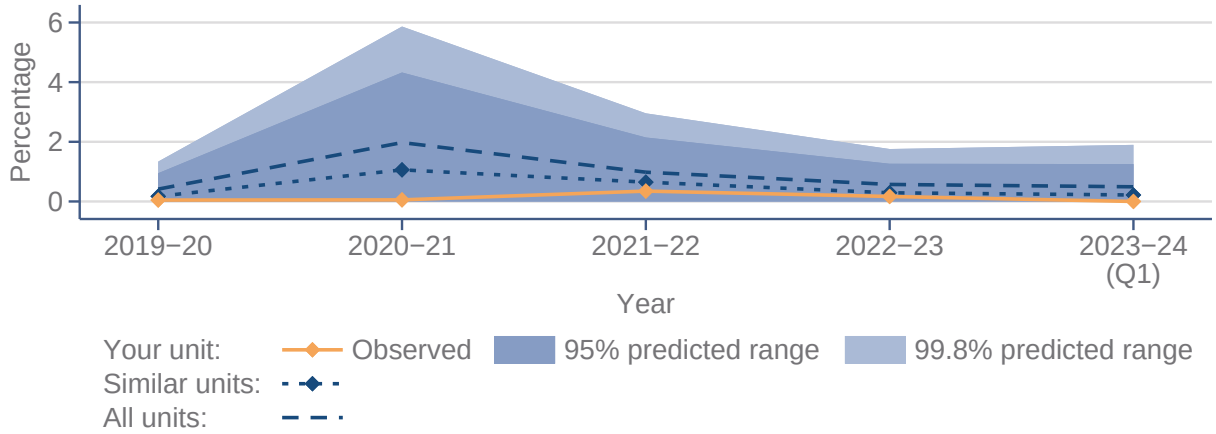
Definition

- Eligible: Critical care unit survivors, excluding those transferred to another critical care unit, self-discharges and planned admissions direct from home
- Complete: The number and percentage of eligible admissions with complete data for location following discharge from your unit
- Observed percentage: The number and percentage of complete eligible admissions discharged direct to a non-hospital location, excluding those discharged to a health-related institution or hospice
- Expected percentage: The overall percentage of discharges direct to home across all critical care units participating in the CMP
- Predicted range: We expect a unit's observed percentage to lie within the 95% predicted range 19 times out of 20 and within the 99.8% predicted range 998 times out of 1000

Non-clinical transfers to another unit



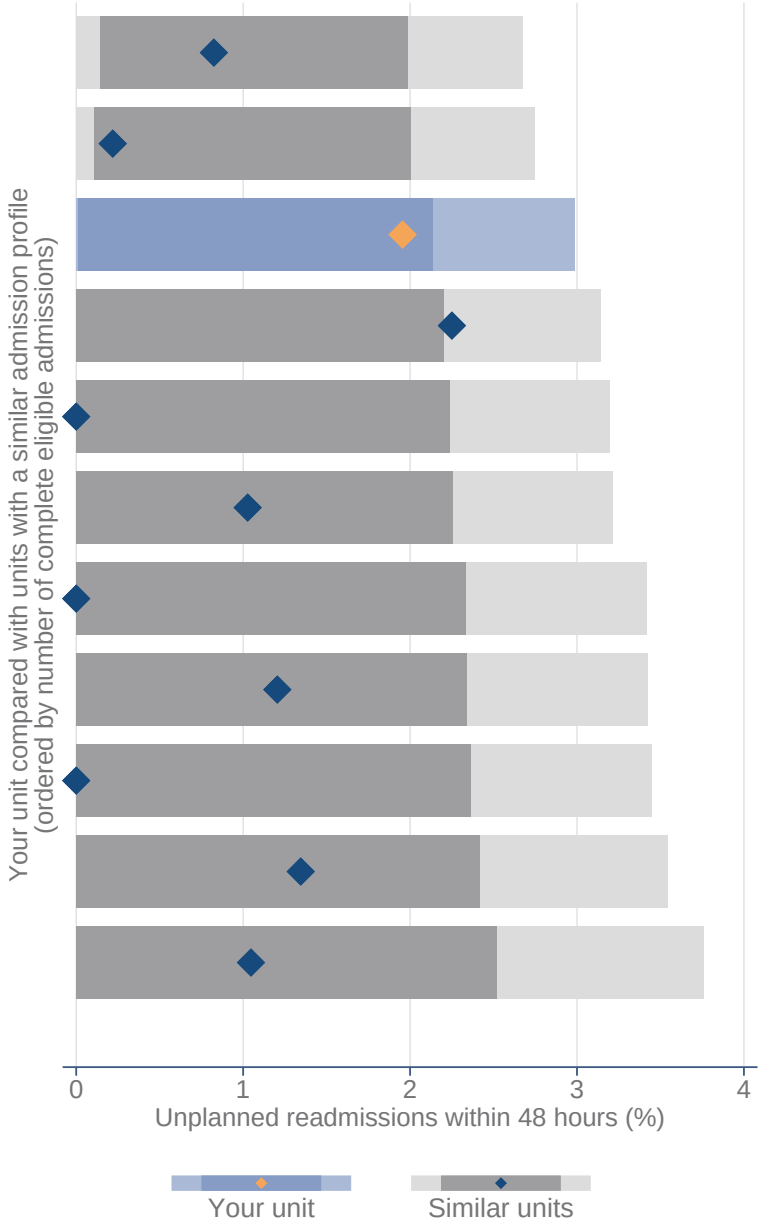
	Eligible n	Complete n (%)		Observed n (%)	Expected %	95% predicted range	99.8% predicted range	
Quarter 1	478	478 (100.0)	●	0 (0.0)	0.5	(0.0, 1.3)	(0.0, 1.9)	●
Quarter 2								
Quarter 3								
Quarter 4								
Year to date	478	478 (100.0)	●	0 (0.0)	0.5	(0.0, 1.3)	(0.0, 1.9)	●



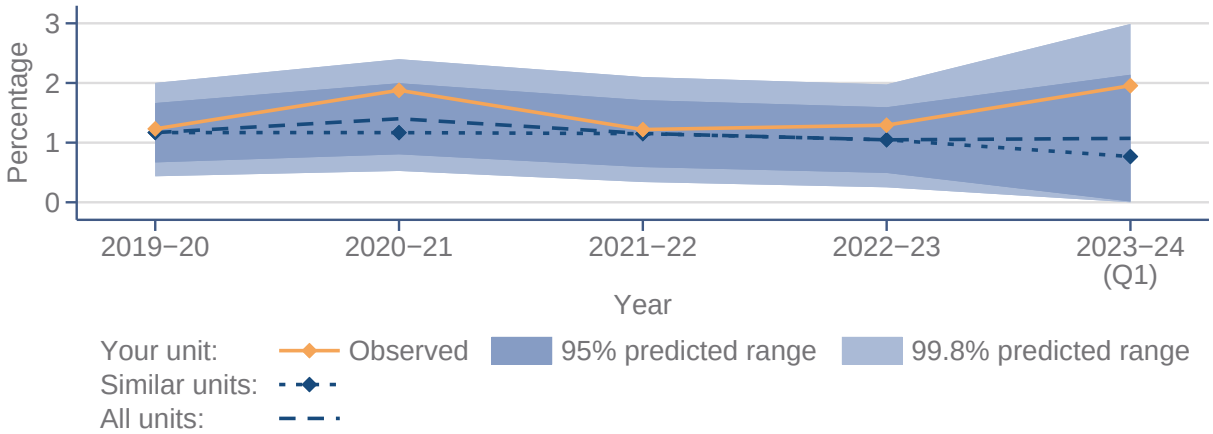
Definition

- Eligible: All critical care unit admissions, excluding those last reported as still in your unit
- Complete: The number and percentage of eligible admissions with complete data for unit discharge
- Observed percentage: The number and percentage of complete eligible admissions discharged for comparable critical care to a critical care unit in another acute hospital and receiving Level 3* care on discharge
  [*for HDUs, Level 2]
- Expected percentage: The overall percentage of non-clinical transfers to another unit across all critical care units participating in the CMP
- Predicted range: We expect a unit's observed percentage to lie within the 95% predicted range 19 times out of 20 and within the 99.8% predicted range 998 times out of 1000

Unplanned readmissions within 48 hours



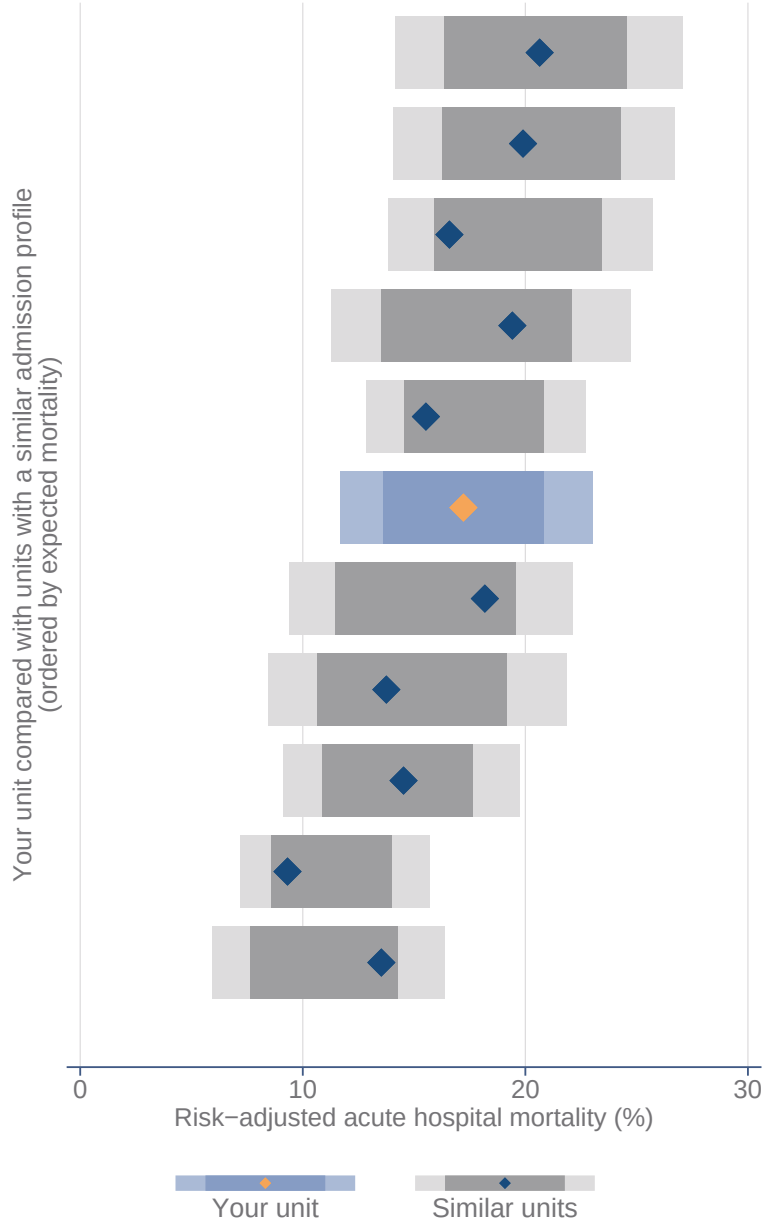
	Eligible n	Complete n (%)	Observed n (%)	Expected %	95% predicted range	99.8% predicted range
Quarter 1	359	358 (99.7)	7 (2.0)	1.1	(0.0, 2.1)	(0.0, 3.0)
Quarter 2						
Quarter 3						
Quarter 4						
Year to date	359	358 (99.7)	7 (2.0)	1.1	(0.0, 2.1)	(0.0, 3.0)



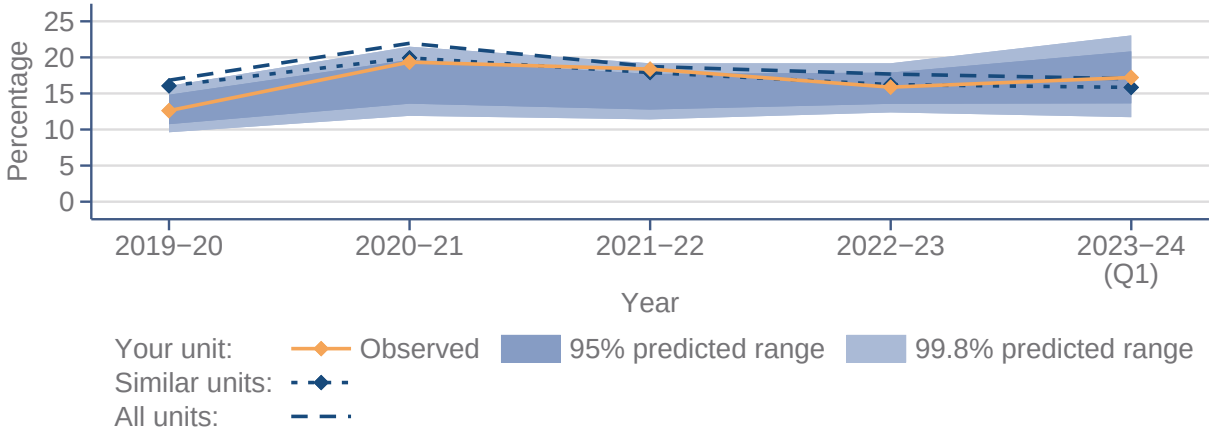
Definition

- Eligible: Critical care unit survivors discharged to a non-critical care location in your hospital
- Complete: The number and percentage of eligible admissions with sufficient data to identify unplanned readmissions
- Observed percentage: The number and percentage of complete eligible admissions subsequently readmitted (unplanned) to your unit within 48 hours of discharge
- Expected percentage: The overall percentage of unplanned readmissions within 48 hours across all critical care units participating in the CMP
- Predicted range: We expect a unit's observed percentage to lie within the 95% predicted range 19 times out of 20 and within the 99.8% predicted range 998 times out of 1000

Risk-adjusted acute hospital mortality



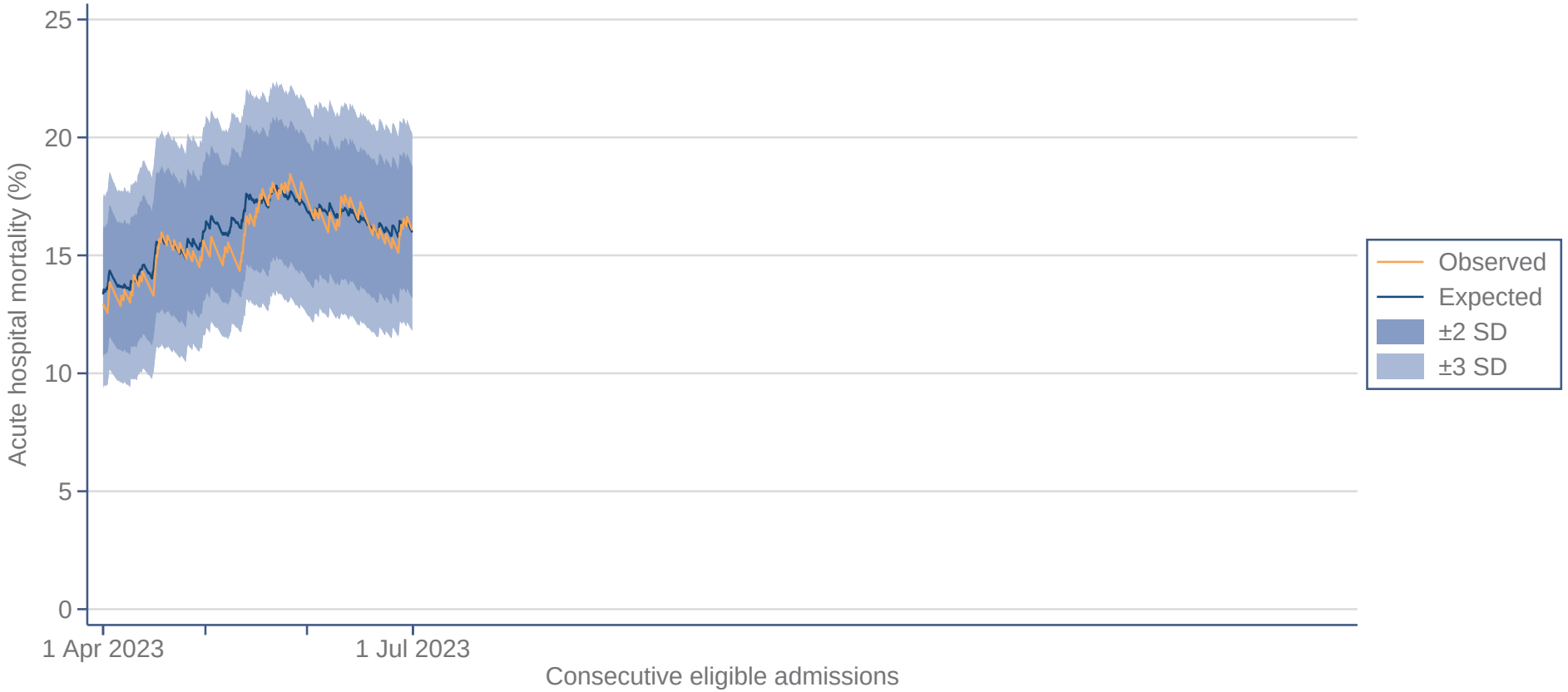
	Eligible n	Complete n (%)		Observed n (%)	Expected %	95% predicted range	99.8% predicted range	
Quarter 1	452	424 (93.8)	▲	73 (17.2)	17.3	(13.6, 20.8)	(11.7, 23.0)	●
Quarter 2								
Quarter 3								
Quarter 4								
Year to date	452	424 (93.8)	▲	73 (17.2)	17.3	(13.6, 20.8)	(11.7, 23.0)	●



Definition

- Eligible: All critical care unit admissions, excluding readmissions, patients dead on admission and those admitted to facilitate organ donation
- Complete: The number and percentage of eligible admissions with sufficient data to calculate an ICNARC$_{H-2023}$ model risk prediction and complete status at discharge from acute hospital
- Observed percentage: The number and percentage of complete eligible admissions that died before ultimate discharge from acute hospital
- Expected percentage: The expected percentage of acute hospital deaths, calculated as the mean predicted risk of death from the ICNARC$_{H-2023}$ model, among complete eligible admissions to your unit
- Predicted range: We expect a unit's observed percentage to lie within the 95% predicted range 19 times out of 20 and within the 99.8% predicted range 998 times out of 1000

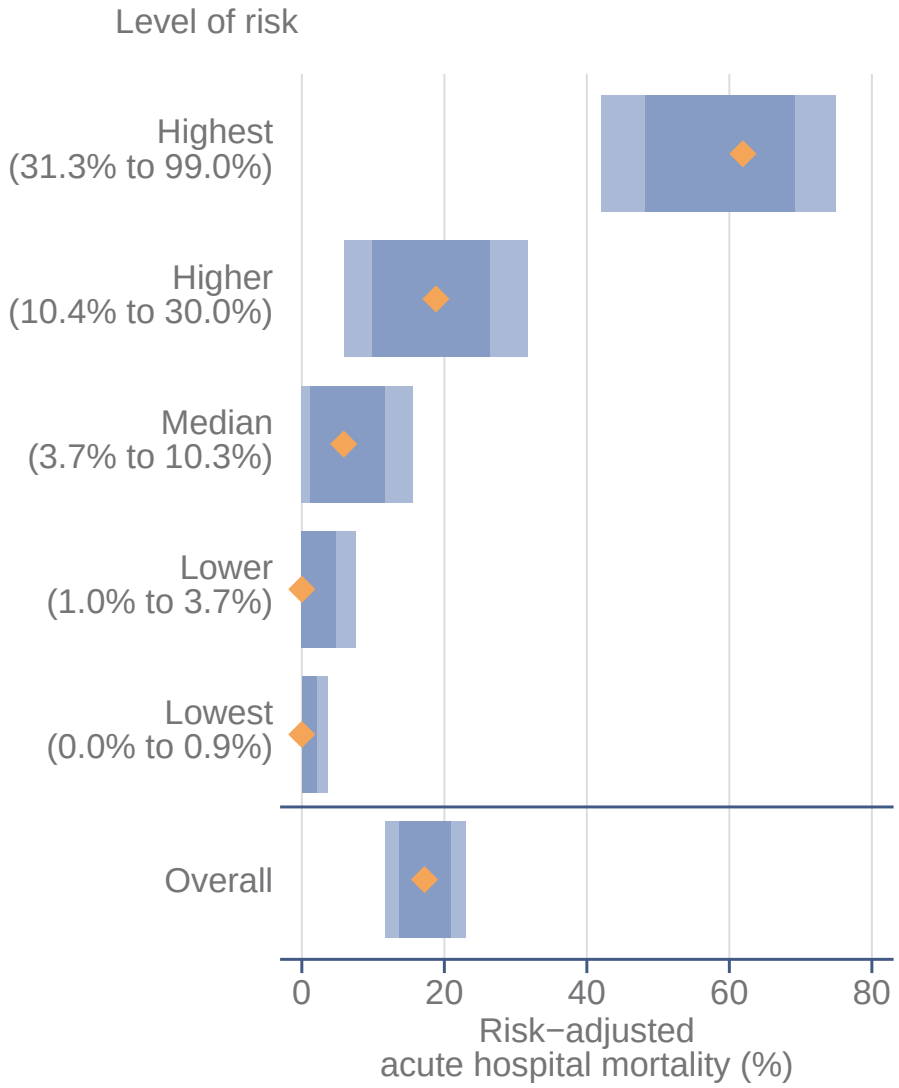
Risk-adjusted acute hospital mortality (EWMA plot)



Explanation

- The Exponentially Weighted Moving Average (EWMA) plot shows the trends in observed and expected acute hospital mortality in your unit for the time period of the report
- Expected acute hospital mortality is calculated from the ICNARC$_{H-2023}$ model
- The plots are updated after each consecutive eligible admission and points are 'exponentially weighted' – giving a larger weighting to the most recent admissions to smooth the appearance of the lines
- The blue shaded areas of the plot represent 2 and 3 standard deviations (SD) above and below the expected line
- If the observed line is above the blue shaded areas, this means the observed acute hospital mortality is significantly higher than expected
- If the observed line is below the blue shaded areas, this means the observed acute hospital mortality is significantly lower than expected

Risk-adjusted acute hospital mortality (by predicted risk)



Level of risk	N	Observed n (%)	Expected %	95% predicted range	99.8% predicted range	
Highest	84	52 (61.9)	59.4	(48.2, 69.2)	(42.0, 74.9)	
Higher	85	16 (18.8)	18.4	(9.9, 26.5)	(6.0, 31.7)	
Median	85	5 (5.9)	6.6	(1.2, 11.7)	(0.0, 15.6)	
Lower	85	0 (0.0)	2.0	(0.0, 4.8)	(0.0, 7.5)	
Lowest	85	0 (0.0)	0.5	(0.0, 2.1)	(0.0, 3.6)	
Overall	424	73 (17.2)	17.3	(13.6, 20.8)	(11.7, 23.0)	

Explanation

- Risk-adjusted acute hospital mortality (by predicted risk) is designed to help identify patient subgroups in which acute hospital mortality is higher (or lower) than expected
- Admissions are divided into 5 equal-sized groups (or 3 if fewer than 250 complete eligible admissions are available), according to their predicted risk of acute hospital mortality
- N is the number of complete eligible admissions (see Risk-adjusted acute hospital mortality)
- Predicted acute hospital mortality is calculated from the ICNARC$_{H-2023}$ model
- If observed acute hospital mortality is higher than predicted overall, then this analysis may help to identify patient subgroups driving that elevation; if acute hospital mortality is within the predicted range overall, then this analysis may still identify subgroups in which mortality is higher or lower than expected

Case mix (demographics)

	Your unit	Similar units	All units
Age (years), mean (SD) [N]	54.7 (16.8) [479]	59.1 (17.2)	60.5 (16.9)
Male, n/N (%)	278/479 (58.0)	(57.3)	(58.3)
BMI (kg/m^2), mean (SD) [N]	28.6 (14.8) [409]	29.4 (27.0)	29.6 (24.5)
Ethnic group, n/N (%)			
White	396/479 (82.7)	(80.5)	(78.7)
Mixed/multiple ethnic groups	1/479 (0.2)	(0.8)	(0.8)
Asian/Asian British	24/479 (5.0)	(3.5)	(5.0)
Black/African/Caribbean/Black British	10/479 (2.1)	(2.3)	(3.0)
All other	28/479 (5.8)	(1.8)	(2.2)
Not stated	20/479 (4.2)	(11.1)	(10.2)
Index of Multiple Deprivation (IMD) quintile *, n (%)			
1 (least deprived)	46/463 (9.9)	(15.1)	(17.0)
2	63/463 (13.6)	(16.8)	(18.7)
3	62/463 (13.4)	(18.8)	(19.8)
4	109/463 (23.5)	(19.0)	(21.9)
5 (most deprived)	183/463 (39.5)	(30.4)	(22.7)

* Index of Multiple Deprivation (IMD) is based on the patient's usual residential postcode (assigned at the level of Lower Layer Super Output Area) according to: English Index of Multiple Deprivation 2019 for postcodes in England; Welsh Index of Multiple Deprivation 2019 for postcodes in Wales; Northern Ireland Multiple Deprivation Measure 2017 for postcodes in Northern Ireland.

Case mix (medical history/organ dysfunction)

	Your unit	Similar units	All units
Admissions with medical history recorded, n	479		
Lungs, n (%)			
Chronic respiratory disease - no functional limitations	73 (15.2)	(10.3)	(10.5)
Chronic respiratory disease - SOB with moderate activity	47 (9.8)	(7.2)	(7.1)
Severe chronic respiratory disease - SOB with light activity	10 (2.1)	(2.0)	(2.0)
Very severe chronic respiratory disease - SOB at rest and/or on home ventilation	4 (0.8)	(0.7)	(0.7)
Heart/vascular, n (%)			
Chronic cardiovascular disease - no functional limitations	158 (33.0)	(17.3)	(18.8)
Chronic cardiovascular disease - symptoms with moderate activity	57 (11.9)	(6.4)	(11.6)
Severe cardiovascular disease - symptoms with light activity	9 (1.9)	(2.1)	(2.7)
Very severe chronic cardiovascular disease - symptoms at rest	1 (0.2)	(0.3)	(0.4)
Kidneys, n (%)			
Chronic kidney disease - not dialysis dependent	31 (6.5)	(7.8)	(8.4)
Chronic kidney disease - dialysis dependent (end stage)	17 (3.5)	(3.4)	(2.9)
Liver, n (%)			
Portal hypertension - no variceal bleed	5 (1.0)	(2.5)	(1.5)
Portal hypertension - with variceal bleed	2 (0.4)	(1.0)	(0.8)
Cirrhosis	14 (2.9)	(3.0)	(3.1)
Hepatic encephalopathy	5 (1.0)	(0.8)	(0.9)
Brain, n (%)			
Cerebrovascular disease/stroke - no functional limitations	23 (4.8)	(4.4)	(4.0)
Cerebrovascular disease/stroke - with functional limitations	30 (6.3)	(2.4)	(2.0)
Dementia	2 (0.4)	(0.8)	(0.7)

Case mix (medical history/other conditions)

	Your unit	Similar units	All units
Admissions with medical history recorded, n	479		
Diabetes, n (%)			
Diabetes - not insulin treated	63 (13.2)	(13.3)	(14.4)
Diabetes - insulin treated	23 (4.8)	(7.4)	(6.9)
Immunocompromise, n (%)			
HIV/AIDS	2 (0.4)	(0.5)	(0.5)
Congenital immunohumoral or cellular immune deficiency state	6 (1.3)	(1.6)	(0.8)
Connective tissue disease	21 (4.4)	(2.9)	(3.3)
Chronic alcohol dependence	92 (19.2)	(10.9)	(8.3)
Chronic drug dependence	29 (6.1)	(3.8)	(3.2)
Previous transplant	8 (1.7)	(1.9)	(1.5)
Therapies, n (%)			
Low or moderate dose steroids	22 (4.6)	(3.3)	(2.9)
High dose steroids	12 (2.5)	(1.1)	(0.8)
Chemotherapy or radiotherapy	45 (9.4)	(7.0)	(5.8)
Tumour/malignancy, n (%)			
Solid tumour - non-metastatic	70 (14.6)	(14.7)	(12.2)
Solid tumour - metastatic	27 (5.6)	(5.2)	(4.0)
Haematological malignancy	12 (2.5)	(2.4)	(2.3)
Stable long-term disability, n (%)	0 (0.0)	(1.0)	(1.1)
Clinical Frailty Scale*, n (%)			
Not frail (1-4)	389 (81.2)	(80.5)	(75.6)
Frail (5-8)	88 (18.4)	(19.5)	(24.2)
Terminal but not frail (9)	2 (0.4)	(0.1)	(0.2)

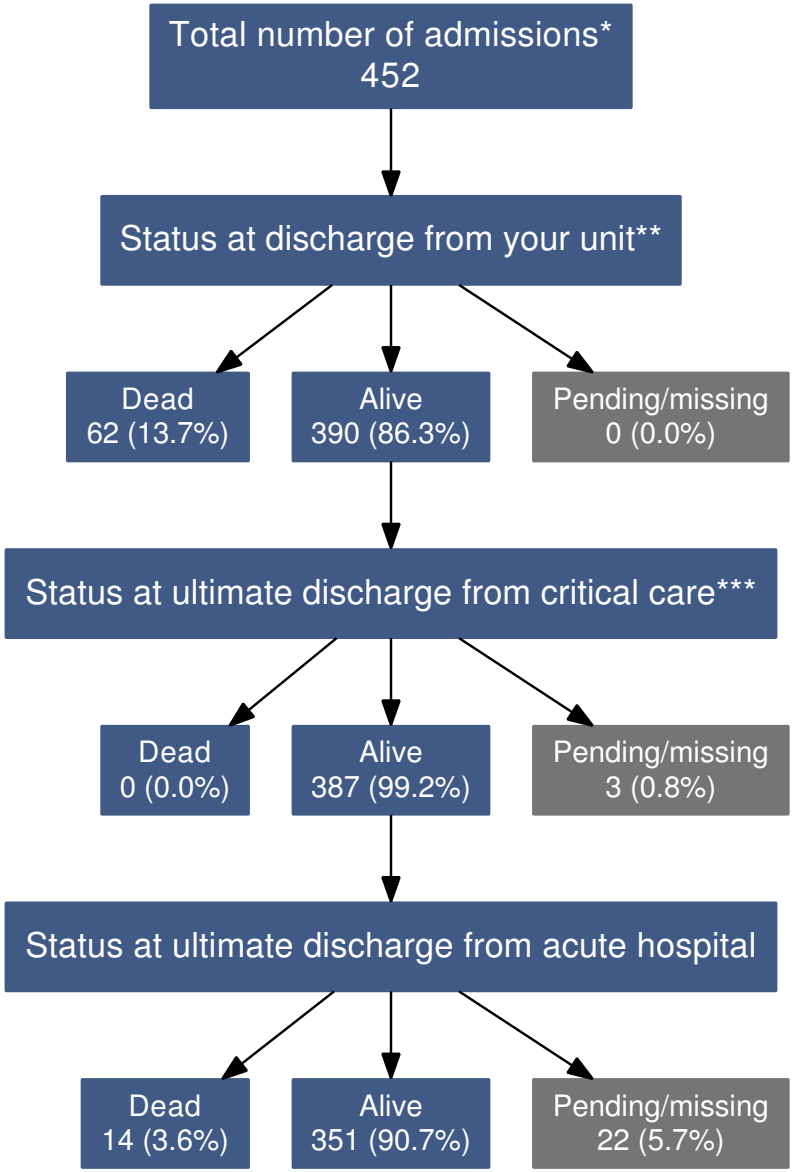
* Rockwood K, Song X, MacKnight C, Bergman H, Hogan DB, McDowell I, Mitnitski A. A global clinical measure of fitness and frailty in elderly people. CMAJ. 2005;173(5):489-95

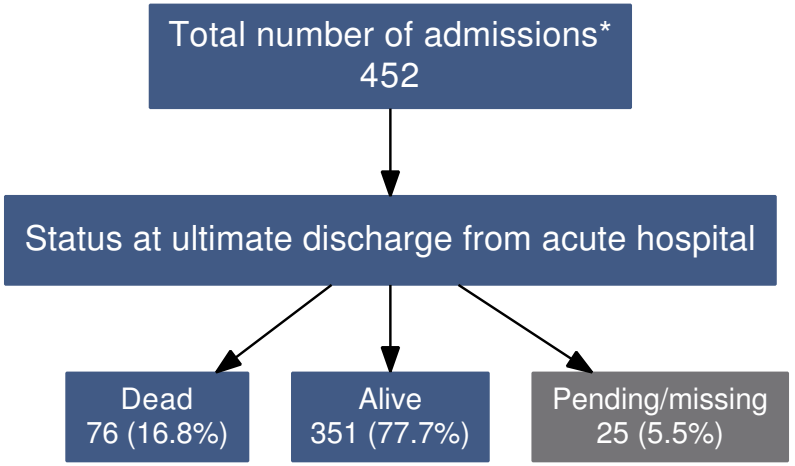
Case mix (indicators of acute severity)

	Your unit	Similar units	All units
Source of admission*, n (%)			
ED or not in hospital – unplanned admission	118 (24.6)	(27.5)	(25.7)
ED or not in hospital – planned admission	0 (0.0)	(0.1)	(0.1)
Theatre – planned admission following elective/scheduled surgery	99 (20.7)	(25.2)	(26.1)
Theatre – unplanned admission following elective/scheduled surgery	7 (1.5)	(4.5)	(3.6)
Theatre – admission following emergency/urgent surgery	147 (30.7)	(21.1)	(18.4)
Ward or intermediate care ward/unit	67 (14.0)	(16.9)	(20.4)
Other critical care unit – repatriation	0 (0.0)	(0.2)	(0.9)
Other critical care unit – planned or unplanned transfer	40 (8.4)	(3.3)	(3.8)
Other hospital (not critical care)	1 (0.2)	(1.1)	(1.0)
CPR within 24 hours prior to admission, n (%)			
Community CPR	19 (4.0)	(3.8)	(3.7)
In-hospital CPR	12 (2.5)	(2.1)	(2.4)
NEWS2 within 24 hours prior to referral			
Mean (sd)	5.8 (3.4)	6.4 (3.3)	6.4 (3.4)
Low risk (aggregate score 0-4), n (%)	38 (24.7)	(25.2)	(24.1)
Medium risk (aggregate score 5-6, or any individual score of 3+), n (%)	55 (35.7)	(25.3)	(27.3)
High risk (aggregate score 7+), n (%)	61 (39.6)	(49.5)	(48.6)
Hours from decision to admit to admission, mean (SD) [N]	1.9 (1.7) [181]	1.5 (1.7)	1.7 (2.2)
Severity scores, mean (SD)			
ICNARC Physiology Score	14.3 (7.8)	15.1 (8.2)	15.7 (8.5)
APACHE II Acute Physiology Score	9.0 (5.6)	10.3 (5.2)	10.4 (5.6)
APACHE II Score	12.7 (6.6)	14.4 (6.0)	14.7 (6.4)
SOFA Score	4.9 (3.4)	4.8 (3.3)	5.0 (3.3)
ICNARC$_{H-2023}$ model predicted risk of acute hospital mortality (%), median (IQR)	7.2 (1.4, 24.6)	4.6 (1.3, 20.7)	5.5 (1.3, 24.3)

* categories are as defined in the ICNARC$_{H-2023}$ model risk prediction model

Outcome



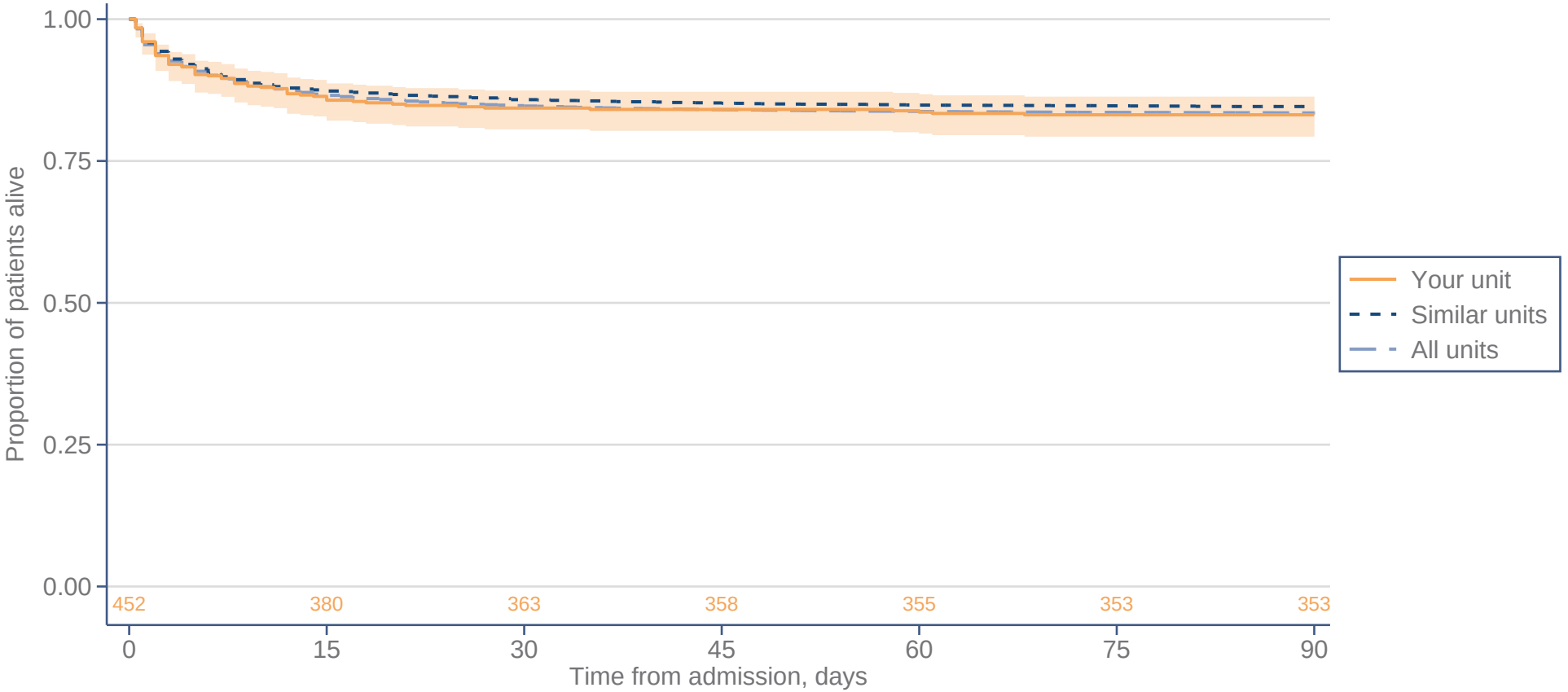


* Excluding readmissions of the same patient within the same acute hospital stay
** Where a patient was admitted to your unit more than once during the same acute hospital stay, the first admission is used
*** For all patients discharged alive from your unit, including those not transferred to another critical care unit

Explanation

- In the staged outcome flow (left), the numbers of admissions at each stage are reported as percentages of those alive at the previous stage
- In the overall outcome flow (above), the status at ultimate discharge from acute hospital is presented as the percentage of all admissions (i.e. excluding readmissions of the same patient in the same acute hospital stay)

Survival (K-M plot)



Explanation

- The Kaplan-Meier (K-M) plot shows the proportion of patients that remain alive by the number of days following admission to the critical care unit
- The shaded area shows a 95% confidence interval around the line for your unit
- The numbers at the foot of the figure are the numbers of patients that have not died or been lost to follow-up for your unit at that time point
- Patients discharged from acute hospital before 90 days are assumed to have survived to 90 days

Admission groups

	Number of admissions (%)			Acute hospital mortality*, n/N (%)		
	Your unit	Similar units	All units	Your unit	Similar units	All units
All admissions	479			76/427 (17.8)	(15.9)	(17.1)
Metastatic disease	27 (5.6)	(4.9)	(4.1)	6/24 (25.0)	(14.1)	(16.6)
Elective/scheduled surgery	106 (22.1)	(29.7)	(29.8)	0/103 (0.0)	(1.9)	(2.0)
Emergency/urgent surgery	147 (30.7)	(20.9)	(18.2)	18/128 (14.1)	(13.3)	(13.9)
Non-surgical	226 (47.2)	(49.4)	(52.0)	58/196 (29.6)	(25.8)	(27.5)
Admissions following trauma‡	110 (23.0)	(8.5)	(6.7)	17/100 (17.0)	(15.4)	(18.3)
Admissions following traumatic brain injury‡	49 (10.2)	(1.7)	(1.8)	11/44 (25.0)	(32.8)	(33.2)
Pneumonia‡	27 (5.6)	(5.7)	(7.9)	7/21 (33.3)	(33.0)	(31.8)
Mechanically ventilated§	200 (41.8)	(32.1)	(39.6)	57/174 (32.8)	(30.6)	(25.9)
Acute kidney injury (all)§	220 (45.9)	(55.3)	(54.9)	40/197 (20.3)	(20.9)	(22.9)
Acute kidney injury (KDIGO stage I)	78 (16.3)	(17.5)	(17.5)	14/65 (21.5)	(14.6)	(15.8)
Acute kidney injury (KDIGO stage II)	98 (20.5)	(26.1)	(25.0)	15/92 (16.3)	(19.5)	(21.2)
Acute kidney injury (KDIGO stage III)	44 (9.2)	(11.7)	(12.3)	11/40 (27.5)	(33.6)	(36.8)
Sepsis (Sepsis-3)§	94 (19.6)	(22.4)	(26.2)	17/81 (21.0)	(23.2)	(26.1)
Sepsis (0 organ dysfunctions)	7 (1.5)	(1.4)	(1.4)	0/7 (0.0)	(6.4)	(7.5)
Sepsis (1 organ dysfunction)	36 (7.5)	(8.0)	(9.0)	2/26 (7.7)	(16.1)	(16.0)
Sepsis (2 organ dysfunctions)	34 (7.1)	(7.7)	(9.2)	7/32 (21.9)	(22.2)	(25.9)
Sepsis (3 organ dysfunctions)	9 (1.9)	(3.8)	(4.5)	3/8 (37.5)	(36.1)	(39.1)
Sepsis (4 or more organ dysfunctions)	8 (1.7)	(1.6)	(2.1)	5/8 (62.5)	(49.0)	(52.3)
Septic shock (Sepsis-3)§	30 (6.3)	(6.9)	(8.1)	9/27 (33.3)	(31.6)	(39.2)

*Excluding readmissions of the same patient within the same acute hospital stay
‡ Primary or secondary reason for admission
§ During the first 24 hours following admission
KDIGO - Kidney Disease: Improving Global Outcomes

Infection (i)

	Your unit	Similar units	All units
Total number of admissions with infection data recorded	478		
MRSA present, n (%)			
Admission MRSA	5 (1.0)	(0.6)	(0.8)
Unit-acquired MRSA	0 (0.0)	(0.1)	(0.1)
No MRSA	455 (95.2)	(90.9)	(92.3)
No samples taken	18 (3.8)	(8.4)	(6.8)
VRE present, n (%)			
Admission VRE	3 (0.6)	(1.0)	(1.0)
Unit-acquired VRE	10 (2.1)	(0.8)	(0.4)
No VRE	43 (9.0)	(31.2)	(35.0)
No samples taken	422 (88.3)	(67.0)	(63.6)
CRE present, n (%)			
Admission CRE	0 (0.0)	(0.2)	(0.2)
Unit-acquired CRE	0 (0.0)	(0.1)	(0.1)
No CRE	24 (5.0)	(36.7)	(40.2)
No samples taken	454 (95.0)	(63.1)	(59.5)
Clostridium difficile present, n (%)			
Admission C. Difficile	0 (0.0)	(0.2)	(0.4)
Unit-acquired C. Difficile	0 (0.0)	(0.3)	(0.2)
No C. Difficile	55 (11.5)	(17.1)	(20.9)
No samples taken	423 (88.5)	(82.3)	(78.5)

Infection (ii)

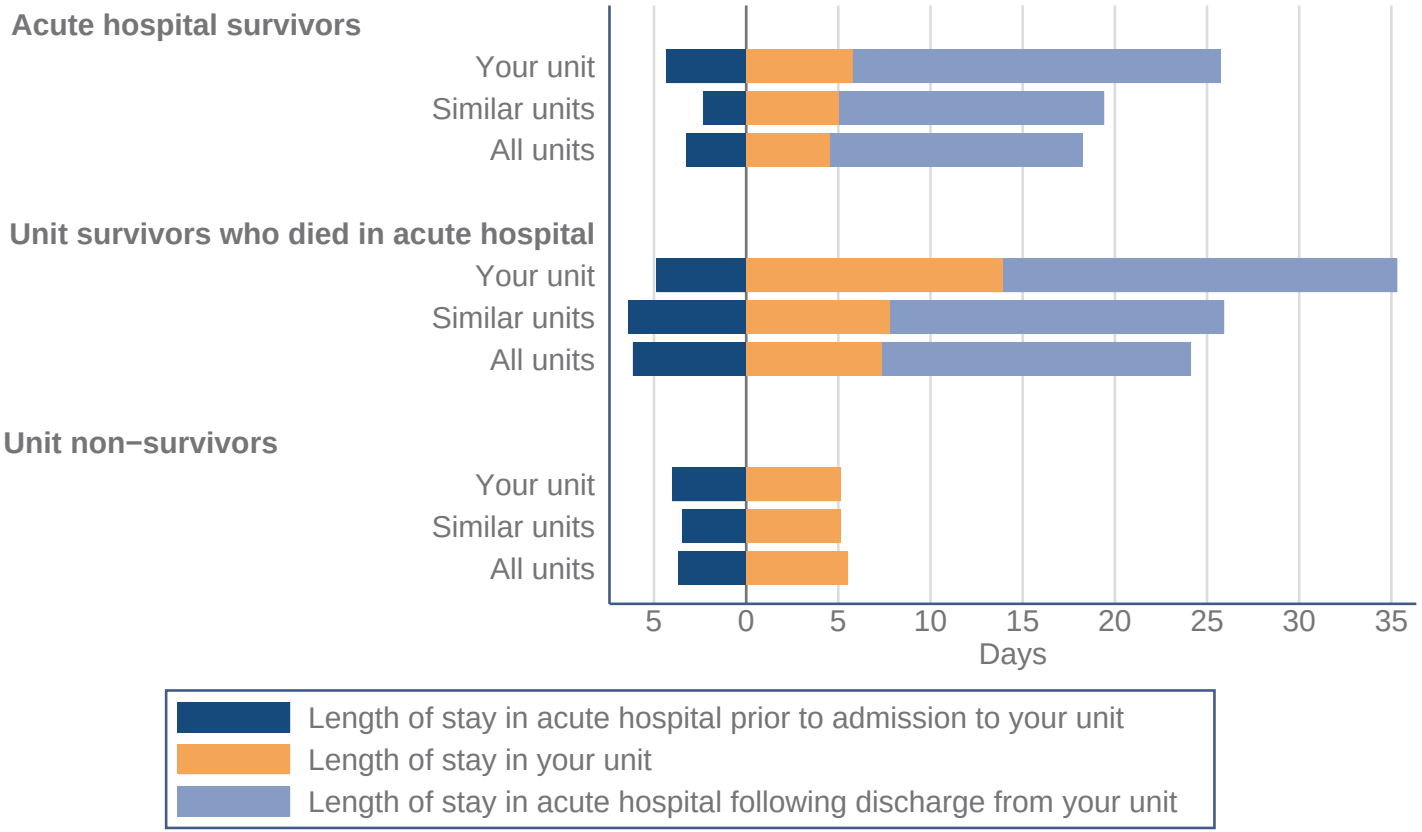
	Your unit	Similar units	All units
Number of admissions staying more than 48 hours, with infection data recorded	364		
Admissions with any unit-acquired infections, in those staying more than 48 hours, n (%)			
Bloodstream infection	7 (1.9)	(1.6)	(1.5)
Non-bloodstream infection	64 (17.6)	(6.6)	(7.5)
Origin of first unit-acquired bloodstream infection, n (%)			
Central venous catheter	2 (28.6)	(36.4)	(31.4)
Peripheral venous catheter	5 (71.4)	(25.0)	(19.1)
Origin of first unit-acquired non-bloodstream infection, n (%)			
Pulmonary	45 (70.3)	(66.5)	(65.6)
Urinary catheter	1 (1.6)	(2.2)	(8.3)
Urinary tract	4 (6.3)	(7.7)	(3.5)
Digestive tract	2 (3.1)	(6.0)	(5.2)
Surgical site	5 (7.8)	(7.1)	(5.7)
Skin and soft tissue (not surgical site)	6 (9.4)	(6.6)	(6.6)
Other	1 (1.6)	(2.7)	(1.4)
Admissions with unit-acquired infections, n (rate per 1,000 patient days)			
Unit-acquired MRSA	0 (0.0)	(0.1)	(0.2)
Unit-acquired VRE	10 (3.0)	(1.4)	(0.8)
Unit-acquired CRE	0 (0.0)	(0.2)	(0.2)
Unit-acquired C. Difficile	0 (0.0)	(0.5)	(0.5)

Length of stay

	N	Median (IQR) or n (%)			Mean (SD)		
	Your unit	Your unit	Similar units	All units	Your unit	Similar units	All units
Length of stay in acute hospital prior to admission to your unit (days)*	452	1 (0, 2)	0 (0, 1)	1 (0, 2)	4 (15)	3 (10)	4 (17)
Length of stay in your unit (days)							
All admissions†	478	3.8 (2.1, 7.6)	3.1 (1.7, 6.2)	2.7 (1.1, 5.7)	6.6 (8.2)	5.4 (7.7)	5.1 (8.0)
Unit survivors	412	4.0 (2.2, 7.7)	3.1 (1.7, 6.2)	2.7 (1.1, 5.6)	6.9 (8.5)	5.5 (7.7)	5.0 (7.8)
Unit non-survivors	66	2.9 (1.4, 7.1)	2.8 (1.0, 6.2)	2.7 (0.9, 6.5)	5.1 (5.6)	5.1 (7.4)	5.5 (9.0)
Duration from reported time fully ready for discharge to time of discharge‡, n (%)							
≤ 4 hours	403	98 (24.3)	(27.9)	(37.0)			
> 4 hours and ≤ 24 hours	403	145 (36.0)	(42.7)	(40.4)			
> 24 hours	403	160 (39.7)	(29.4)	(22.6)			
Length of stay in acute hospital following discharge from your unit (days)*§							
All unit survivors	324	12 (5, 25)	8 (4, 18)	7 (4, 16)	20 (23)	15 (19)	14 (18)
Acute hospital survivors	306	12 (5, 25)	7 (4, 17)	7 (4, 16)	20 (23)	14 (19)	14 (18)
Acute hospital non-survivors	14	13 (3, 23)	11 (3, 24)	9 (3, 22)	21 (29)	18 (21)	17 (21)
Total length of stay in acute hospital (days)*							
All patients	427	15 (7, 29)	11 (5, 23)	11 (6, 22)	25 (30)	19 (24)	19 (26)
Acute hospital survivors	351	16 (8, 34)	11 (6, 24)	12 (6, 23)	27 (31)	20 (24)	20 (27)
Acute hospital non-survivors	76	6 (2, 16)	6 (2, 15)	7 (2, 17)	15 (22)	14 (26)	14 (21)

* Excluding readmissions of the same patient within the same acute hospital stay
† Excluding admissions still in the critical care unit at the time this report was run
‡ Reported for unit survivors discharged to a ward in the same hospital (or direct to home)
§ Reported for unit survivors only, excluding those discharged direct to a non-acute hospital or non-hospital location

Mean length of stay



Occupied bed-days by reported primary specialty

	N*	Occupied bed-days (%)		
	Your unit	Your unit	Similar units	All units
Neurosurgery	98	630 (23.7)	(7.6)	(6.5)
Neurology	76	617 (23.2)	(3.8)	(1.7)
General surgery	90	551 (20.7)	(16.0)	(13.3)
Trauma & orthopaedics	33	240 (9.0)	(6.5)	(4.9)
General medicine	37	220 (8.3)	(13.2)	(24.5)
Respiratory medicine	23	180 (6.8)	(4.0)	(4.1)
Spinal injuries	47	169 (6.4)	(0.8)	(0.2)
Other†	14	50 (1.9)	(48.0)	(44.8)

*Number of admissions, excluding admissions still in the critical care unit at the time this report was run
† Specialties occupying less than 1% of bed-days in your unit

Organ support and interventions (i)

	Number of admissions receiving support (%)			Days of support (% of all patient days)		
	Your unit	Similar units	All units	Your unit	Similar units	All units
Respiratory support						
Basic	264/478 (55.2)	(37.0)	(46.7)	682 (18.8)	(21.9)	(24.2)
Advanced	222/478 (46.4)	(34.8)	(43.0)	1386 (38.3)	(32.1)	(38.8)
Mode of respiratory support						
Non-invasive ventilatory support	34/479 (7.1)	(24.5)	(26.6)			
Invasive ventilatory support	223/479 (46.6)	(34.4)	(43.4)			
$ECCO_2R$	0/479 (0.0)	(0.0)	(0.1)			
V-V ECMO	0/479 (0.0)	(0.0)	(0.1)			
V-A ECMO	0/479 (0.0)	(0.0)	(0.1)			
Prone position	6/479 (1.3)	(0.6)	(0.7)			
Intubation						
Translaryngeal intubation	218/479 (45.5)	(33.4)	(33.5)			
Tracheostomy	31/479 (6.5)	(5.6)	(5.0)			

Organ support and interventions (ii)

	Number of admissions receiving support (%)			Days of support (% of all patient days)		
	Your unit	Similar units	All units	Your unit	Similar units	All units
Cardiovascular support						
Basic	455/478 (95.2)	(91.5)	(85.6)	2328 (64.3)	(74.5)	(71.4)
Advanced	60/478 (12.6)	(14.6)	(22.7)	114 (3.1)	(6.7)	(12.2)
Central venous catheter	238/479 (49.7)	(50.3)	(54.7)	1148 (31.7)	(41.2)	(49.8)
Renal support	38/478 (7.9)	(12.4)	(10.8)	178 (4.9)	(14.0)	(10.8)
Urinary catheter	444/479 (92.7)	(64.0)	(78.6)	3161 (87.3)	(53.0)	(74.2)
Neurological support	108/478 (22.6)	(11.2)	(9.0)	774 (21.4)	(9.4)	(7.9)
Gastrointestinal support	281/478 (58.8)	(31.5)	(33.0)	2391 (66.0)	(44.3)	(48.8)
Route of gastrointestinal support						
Enteral tube feeding	256/479 (53.4)	(29.2)	(30.4)			
Parenteral tube feeding	68/479 (14.2)	(4.5)	(5.0)			
Dermatological support	78/478 (16.3)	(2.8)	(2.9)	200 (5.5)	(4.0)	(3.0)
Liver support	26/478 (5.4)	(1.4)	(1.4)	36 (1.0)	(0.9)	(0.9)

Levels of care

	Number of admissions (%)			Days at each level of care (% of all patient days)		
	Your unit	Similar units	All units	Your unit	Similar units	All units
Level of care received at any time during unit stay						
Level 3	284 (59.4)	(44.6)	(50.9)	1706 (47.1)	(42.9)	(47.3)
Level 2	405 (84.7)	(80.6)	(80.0)	1317 (36.4)	(47.4)	(44.1)
Level 1	104 (21.8)	(19.1)	(16.5)	231 (6.4)	(7.0)	(6.0)
Level 0	179 (37.4)	(9.2)	(8.6)	367 (10.1)	(2.7)	(2.6)
Highest level of care ever received						
Level 3	284 (59.4)	(44.6)	(50.9)			
Level 2	191 (40.0)	(54.1)	(47.5)			
Level 1	2 (0.4)	(1.2)	(1.3)			
Level 0	1 (0.2)	(0.1)	(0.2)			
Level of care at discharge from your unit						
Level 3	3 (0.7)	(2.1)	(3.3)			
Level 2	77 (18.7)	(12.5)	(16.4)			
Level 1	289 (70.1)	(29.0)	(42.5)			
Level 0	43 (10.4)	(56.4)	(37.8)			

Healthcare Resource Groups

	Number of admissions receiving support (%)			Days of level 2 or 3 care* (% of all patient days)		
	Your unit	Similar units	All units	Your unit	Similar units	All units
Healthcare Resource Group [HRG code]						
6 organs supported [XC01Z]	3 (0.6)	(0.2)	(0.2)	61 (2.0)	(0.9)	(1.0)
5 organs supported [XC02Z]	10 (2.1)	(1.2)	(0.8)	228 (7.5)	(5.2)	(3.0)
4 organs supported [XC03Z]	34 (7.1)	(4.1)	(3.9)	547 (18.1)	(11.1)	(11.3)
3 organs supported [XC04Z]	108 (22.5)	(12.1)	(16.2)	918 (30.4)	(19.7)	(25.6)
2 organs supported [XC05Z]	135 (28.2)	(27.0)	(29.9)	739 (24.4)	(27.9)	(29.8)
1 organ supported [XC06Z]	185 (38.6)	(52.1)	(46.3)	529 (17.5)	(34.4)	(28.7)
0 organs supported [XC07Z]	1 (0.2)	(2.0)	(1.2)	1 (0.0)	(0.7)	(0.4)
No Level 2 or 3 care received [UZ01Z]	3 (0.6)	(1.3)	(1.6)	n/a*		

*Days of level 2 or 3 care are reported for all admissions, grouped by the total number of organs supported at any time during the unit stay.

Treatment limitations & goals

	Your unit	Similar units	All units
Treatment limitations at admission, n/N (%)			
Any limitations present	49/479 (10.2)	(7.0)	(9.0)
Not for invasive ventilation	14/479 (2.9)	(2.6)	(4.4)
Not for CPR	41/479 (8.6)	(6.4)	(7.7)
Not for renal replacement	20/479 (4.2)	(2.1)	(3.3)
Other limitation	5/479 (1.0)	(1.1)	(1.3)
New treatment limitations present at discharge or death, n/N (%)			
Any new limitations	42/478 (8.8)	(9.2)	(11.4)
Not for invasive ventilation	4/478 (0.8)	(4.2)	(5.5)
Not for CPR	41/478 (8.6)	(7.6)	(9.1)
Not for renal replacement	3/478 (0.6)	(4.0)	(5.2)
Other limitation	1/478 (0.2)	(1.8)	(3.8)
Treatment goals at admission, n/N (%)			
Pre-surgical preparation	0/479 (0.0)	(0.2)	(0.2)
Active treatment	463/479 (96.7)	(99.1)	(99.2)
Assessment of devastating illness/injury	5/479 (1.0)	(0.5)	(0.3)
Consideration for organ donation	10/479 (2.1)	(0.1)	(0.1)
End-of-life care	1/479 (0.2)	(0.1)	(0.2)
Unit survivors, n/N (%)	412/479 (86.0)	(88.7)	(87.6)
Treatment goals & limitations at discharge, n/N (%)			
Not for readmission to critical care	3/359 (0.8)	(0.9)	(1.8)
Palliative care	4/359 (1.1)	(1.5)	(1.4)

End-of-life care

	Your unit	Similar units	All units
Unit non-survivors, n (%)	66 (13.8)	(11.7)	(12.1)
Length of stay in your unit for unit non-survivors (hours), median (IQR)	71 (34, 171)	67 (24, 149)	64 (22, 157)
Treatment withdrawn, n (% of unit non-survivors)	32 (48.5)	313 (64.7)	3558 (60.7)
Time from admission to treatment withdrawal (hours), median (IQR)	86 (39, 212)	68 (23, 145)	73 (24, 170)
Time from treatment withdrawal to death (hours), median (IQR)	4 (1, 10)	2 (1, 4)	2 (1, 5)
Brainstem death declared, n (% of unit non-survivors)	6 (9.1)	(6.2)	(6.1)
Solid organ donation, n (% of brainstem/cardiac deaths)			
Donor after brainstem death (DBD)	5 (83.3)	(36.7)	(47.2)
Donor after cardiac death (DCD)	2 (3.3)	(3.1)	(2.8)
Time from death to removal of body (hours), median (IQR)	3 (2, 4)	2 (2, 4)	2 (2, 3)

Participation