

Key statistics from the Case Mix Programme

2013/2014

- Based on 142,038 admissions to 202 NHS adult, general critical care units, 1 April 2013 to 31 March 2014
- Trends on 630,763 admissions to 217 NHS adult, general critical care units, 1 April 2009 to 31 March 2014

CMP Annual Quality Report

ICNARC publicly reports on risk-adjusted acute hospital mortality and nine other Potential Quality Indicators (PQIs) by way of the CMP Annual Quality Report, where PQIs are displayed in a dashboard and as funnel plots. Formal, local consent is requested prior to publication and a strict outlier management process is followed.

CMP Annual Quality Reports are available on ICNARC's online reporting site <https://onlinereports.icnarc.org>

Potential Quality Indicators (PQIs)

	Overall	Median (IQR) across units
Risk-adjusted hospital mortality*, observed deaths	28,885	
expected deaths	29,282	
standardised mortality ratio	0.99	1.00 (0.92, 1.08)
Risk-adjusted hospital mortality <20%, observed deaths	5,067	
expected deaths	5,181	
standardised mortality ratio	0.98	0.98 (0.81, 1.15)
Risk-adjusted hospital mortality ≥20%, observed deaths	23,818	
expected deaths	24,101	
standardised mortality ratio	0.99	1.00 (0.93, 1.08)
Unit-acquired MRSA, rate per 1,000 patient days**†	0.6	0.4 (0, 0.9)
Unit-acquired infections present in blood, rate per 1,000 patient days**	1.4	0.9 (0.3, 2.0)
Non-clinical transfers (out), percentage of all critical care unit admissions	0.6	0.4 (0.1, 0.9)
Out-of-hours discharges to the ward, percentage of all critical care unit survivors discharged to a ward in the same hospital	7.6	7.2 (4.3, 10.5)
Out-of-hours discharges to the ward (not delayed), percentage of all critical care unit survivors discharged to a ward in the same hospital	2.8	2.5 (1.4, 4.3)
Daytime discharges to the ward, percentage of all critical care unit survivors discharged to a ward in the same hospital	92.4	92.8 (89.5, 95.7)
Delayed discharges (12 hour delay), percentage of all available critical care bed days	4.4	3.1 (1.3, 5.5)
Delayed discharges (24 hour delay), percentage of all available critical care bed days	3.0	2.0 (0.8, 3.8)
Unplanned readmissions within 48 hours, percentage of all critical care unit survivors discharged to a ward in the same hospital	1.4	1.3 (0.8, 1.8)

* Excluding: 6,023 (4.2%) readmissions within the same acute hospital stay and 421 (0.3%) admissions with missing data

** Identified in critical care unit for admissions staying 48 hours or more

† Excluding those with same infection identified in the first 48 hours

Case mix

Number of admissions	142,038
Extrapolated number of admissions [†]	156,300
Number of patients	131,325
Age (years), mean (SD)	61.4 (18.0)
Sex (male), n (%)	78,322 (55.1)
Number of severe conditions in past medical history*, n (%)	
0	116,542 (82.5)
1	17,034 (12.1)
2	6,058 (4.3)
3 or more	1,691 (1.2)
Surgical status**, n (%)	
Elective/scheduled	32,522 (22.9)
Emergency/urgent	25,769 (18.1)
Non-surgical	83,730 (59.0)
Admission groups, n (%)	
Mechanically ventilated during first 24 hours	56,443 (39.7)
Severe sepsis during first 24 hours	28,063 (20.0)
Pneumonia as a primary or secondary reason for admission	16,772 (11.8)
Trauma, perforation or rupture as a primary or secondary reason for admission	16,013 (11.3)
Admission MRSA, n (%)	2,012 (1.4)
Admission VRE, n (%)	700 (0.5)
Admission C. diff, n (%)	714 (0.5)
ICNARC physiology score, mean (SD)	17.0 (9.3)
ICNARC (2013) model predicted acute hospital mortality ^{††} (%), median (IQR)	10.8 (3.0, 33.3)
ICNARC (2013) model predicted acute hospital mortality ^{††} (%), mean (SD)	21.8 (24.9)

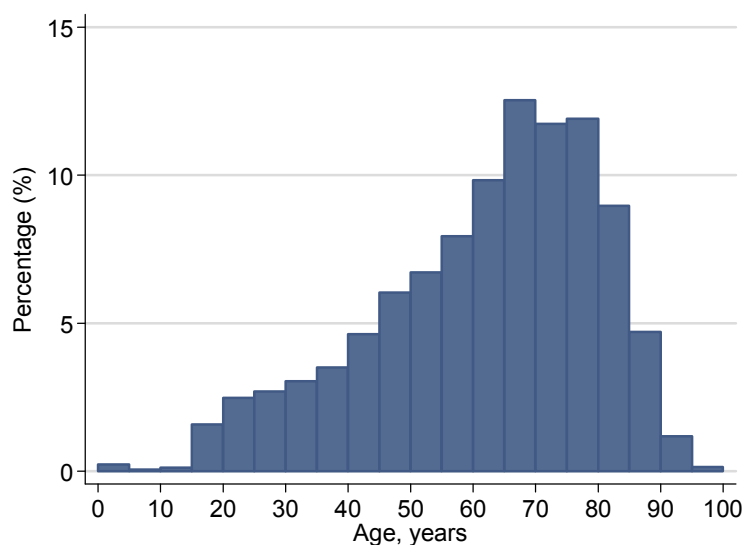
[†] Extrapolations are based on expected admissions to 215 adult, general critical care units in England, Wales and Northern Ireland, and are calculated from 91% coverage of these units

* No evidence to assess past medical history for 713 (0.5%) admissions

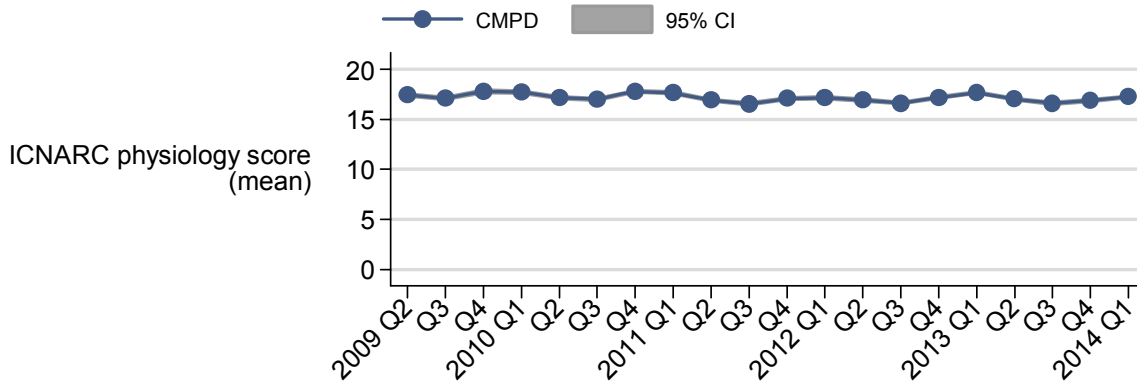
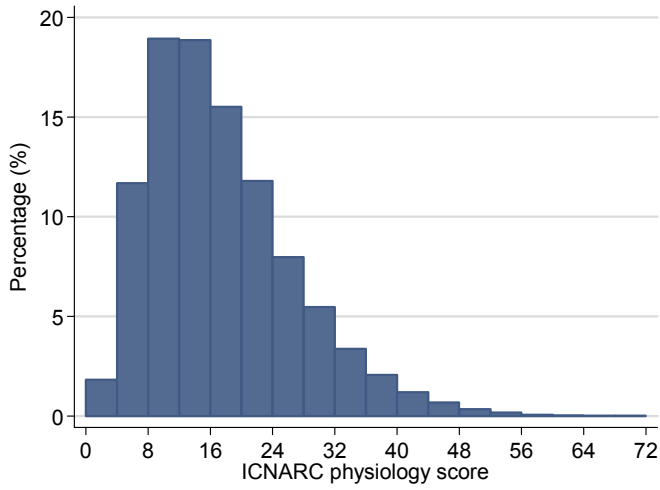
** Excluding 17 (0.01%) admissions with missing data

†† Excluding 9 (0.01%) admissions with insufficient data

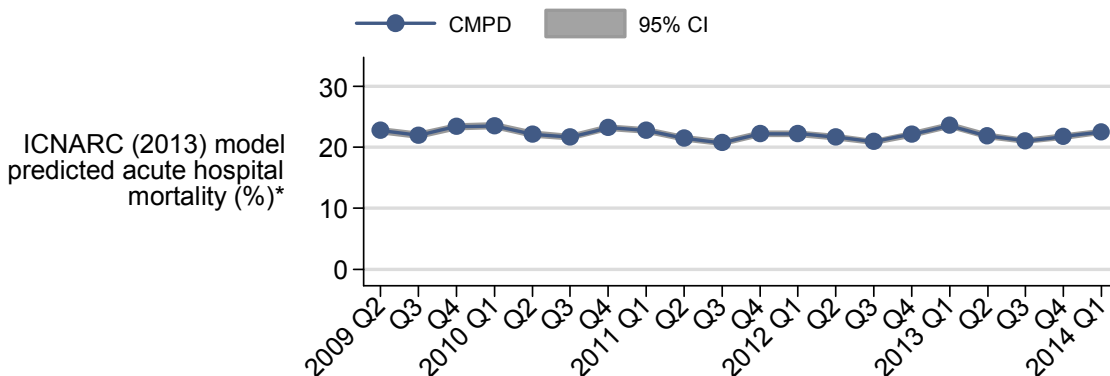
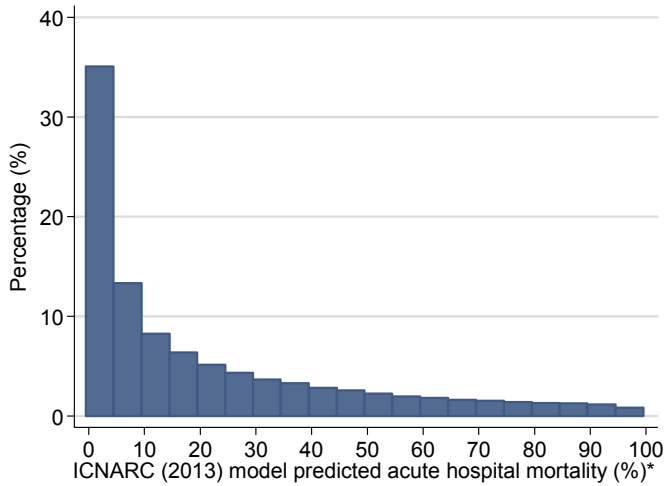
Age



ICNARC physiology score



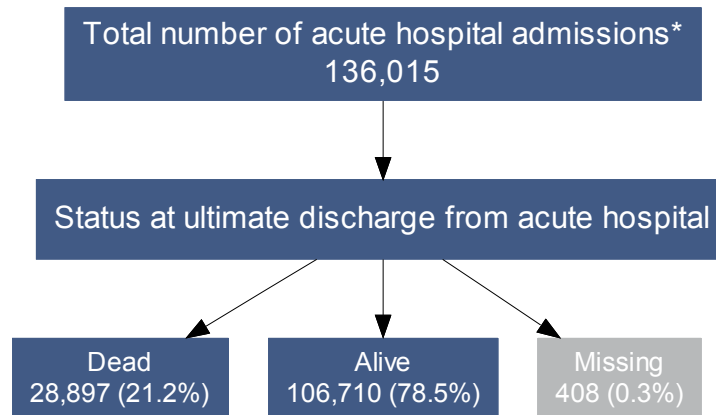
ICNARC (2013) model predicted acute hospital mortality



* Excluding 27 (<0.01%) admissions with insufficient data

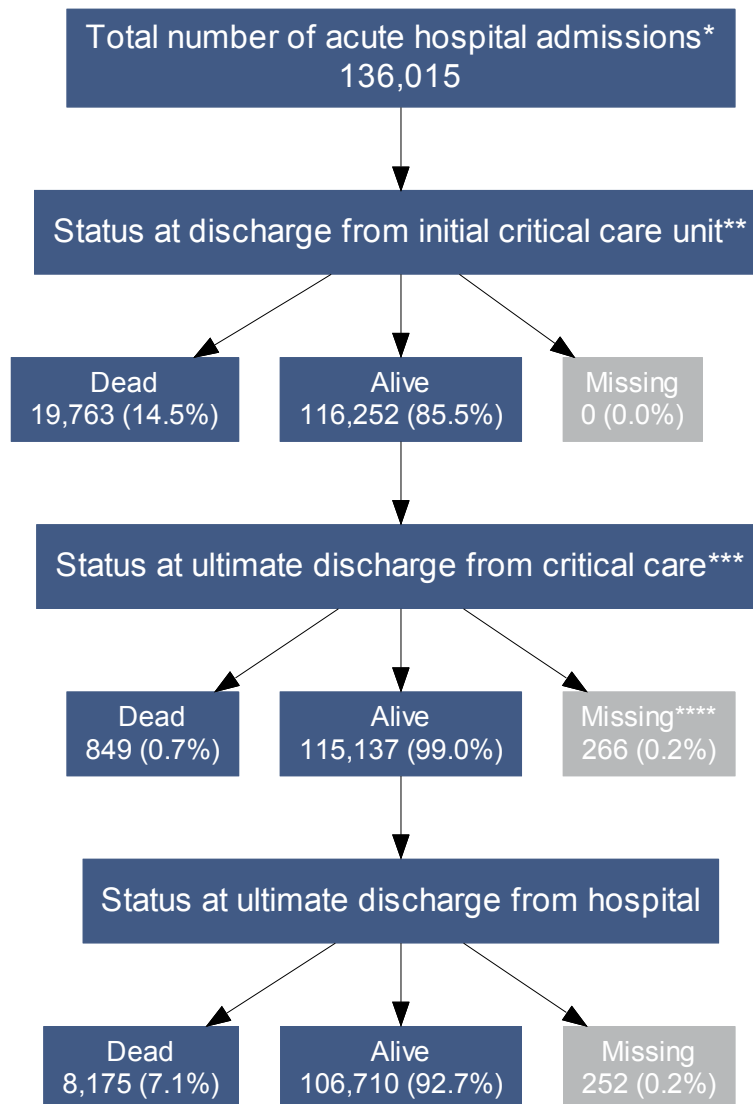
Overall outcome flow

The overall outcome flow shows the ultimate outcome for all acute hospital admissions with a critical care unit stay.



Staged outcome flow

The staged outcome flow shows the outcome at different stages from initial critical care unit discharge to ultimate discharge from acute hospital.



* Excluding 6,023 (4.2%) readmissions to the critical care unit during the same acute hospital stay

** Where more than one critical care unit admission exists for a patient during the same hospital stay, then the outcome for the first admission has been used

*** For all patients discharged alive from the initial critical care unit, including those not transferred to another critical care unit

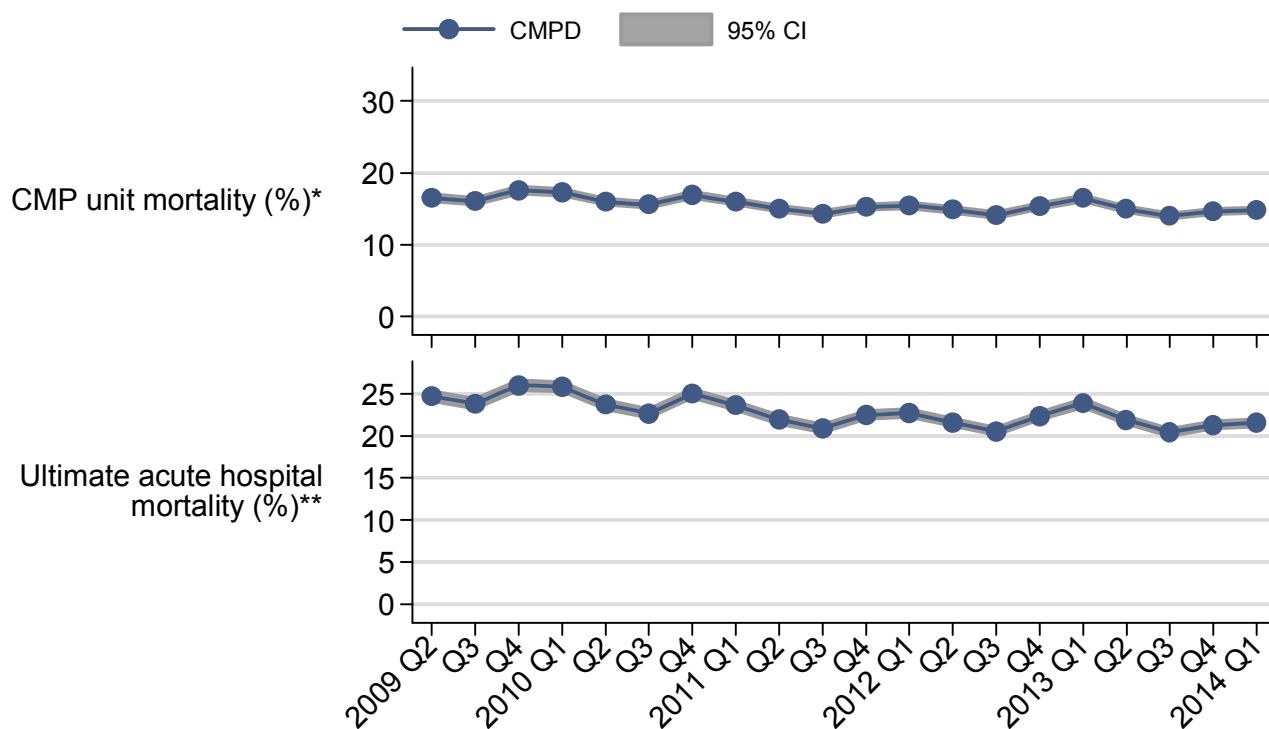
**** Including: 110 admissions missing ultimate discharge from critical care but known to be dead at ultimate discharge from acute hospital

Unadjusted (crude) mortality

	N	Deaths (%)
Critical care unit mortality	142,038	20,686 (14.6)
Acute hospital mortality*	135,607	28,897 (21.3)
Surgical status		
Elective/scheduled	32,123	1,117 (3.5)
Emergency/urgent	24,598	4,275 (17.4)
Non-surgical	78,872	23,501 (29.8)
Admission groups		
Mechanically ventilated	53,797	17,895 (33.3)
Severe sepsis	26,092	8,928 (34.2)
Pneumonia	15,408	5,776 (37.5)
Trauma, perforation or rupture	15,227	2,958 (19.4)

* Excluding: 6,023 (4.2%) readmissions within the same acute hospital stay and 408 (0.3%) admissions with missing data

Unadjusted (crude) mortality – trends



* Excluding: 1 (<0.01%) admission with missing data

** Excluding: 28,372 (4.5%) readmissions within the same acute hospital stay and 1,949 (0.3%) admissions with missing data

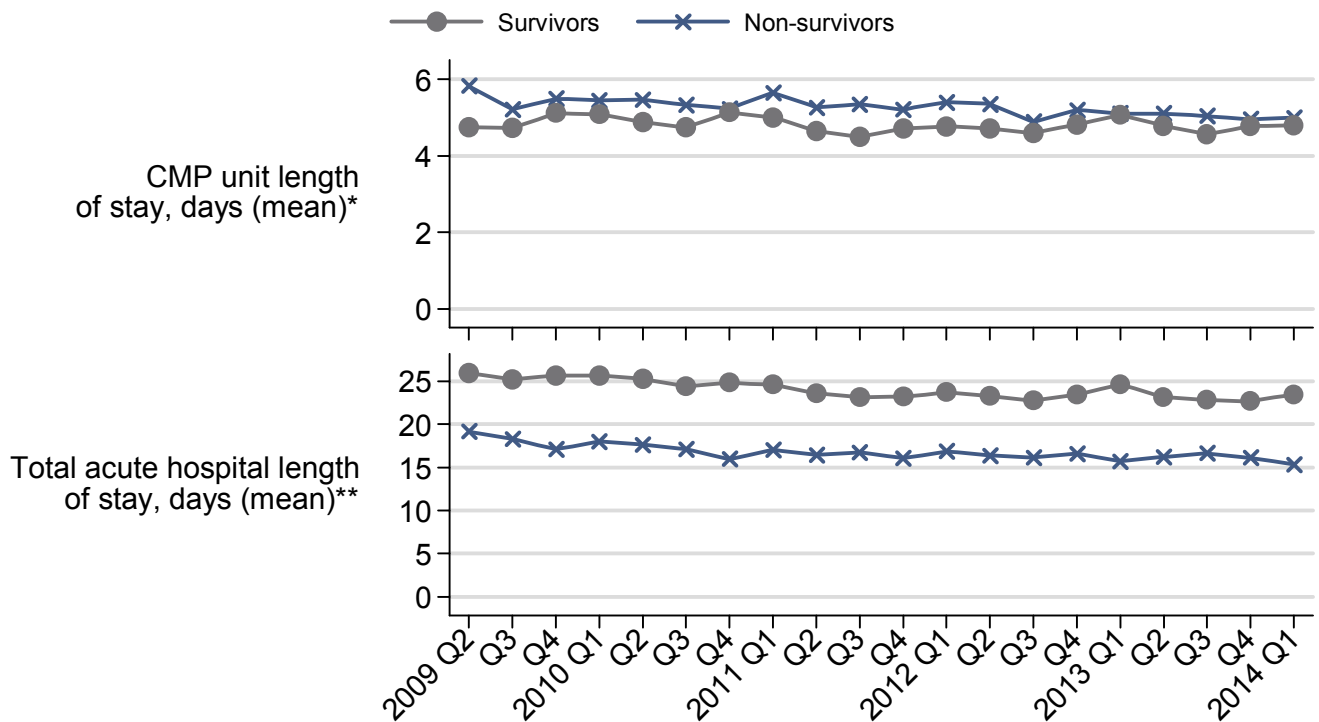
Length of stay (LOS)

		Median (IQR)	Mean (SD)
Critical care unit LOS*	All admissions	2.2 (1.0, 5.0)	4.8 (8.5)
	Critical care unit survivors	2.2 (1.0, 5.0)	4.7 (8.4)
	Critical care unit non-survivors	2.1 (0.8, 5.7)	5.0 (8.9)
Acute hospital LOS**	All admissions	12 (6, 25)	21.8 (31.9)
	Acute hospital survivors	13 (7, 27)	23.3 (33.0)
	Acute hospital non-survivors	7 (2, 19)	16.3 (27.0)

* Does not include continuous critical care pre-/post-admission to the CMP unit. Excluding: 6 (<0.01%) admissions with missing data

** Excluding: 6,023 (4.2%) readmissions within the same acute hospital stay and 880 (0.6%) admissions with missing data

LOS – trends



* Excluding: 22 (<0.01%) admissions with missing data

** Excluding: 28,372 (4.5%) readmissions within the same acute hospital stay and 4,592 (0.7%) admissions with missing data