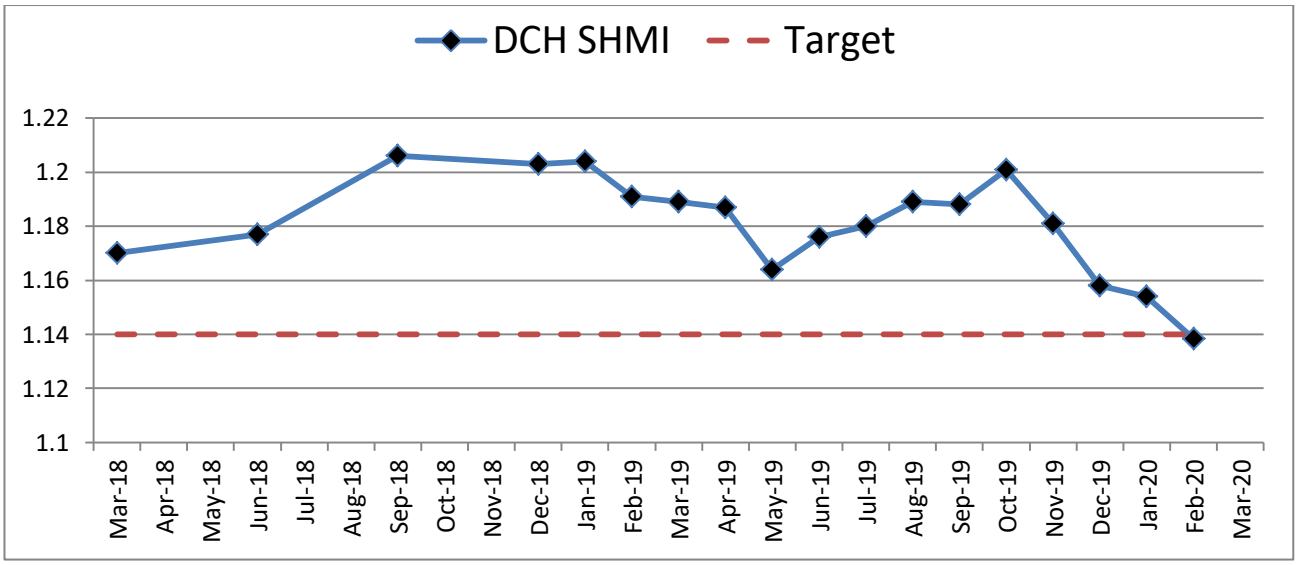
Title of Meeting	**Board of Directors**
Date of Meeting	**29 July 2020**
Report Title	**Mortality Report: Learning from Deaths Qtr 1 2020/21**
Author	Prof. Alastair Hutchison, Medical Director
Responsible Executive	Prof. Alastair Hutchison, Medical Director

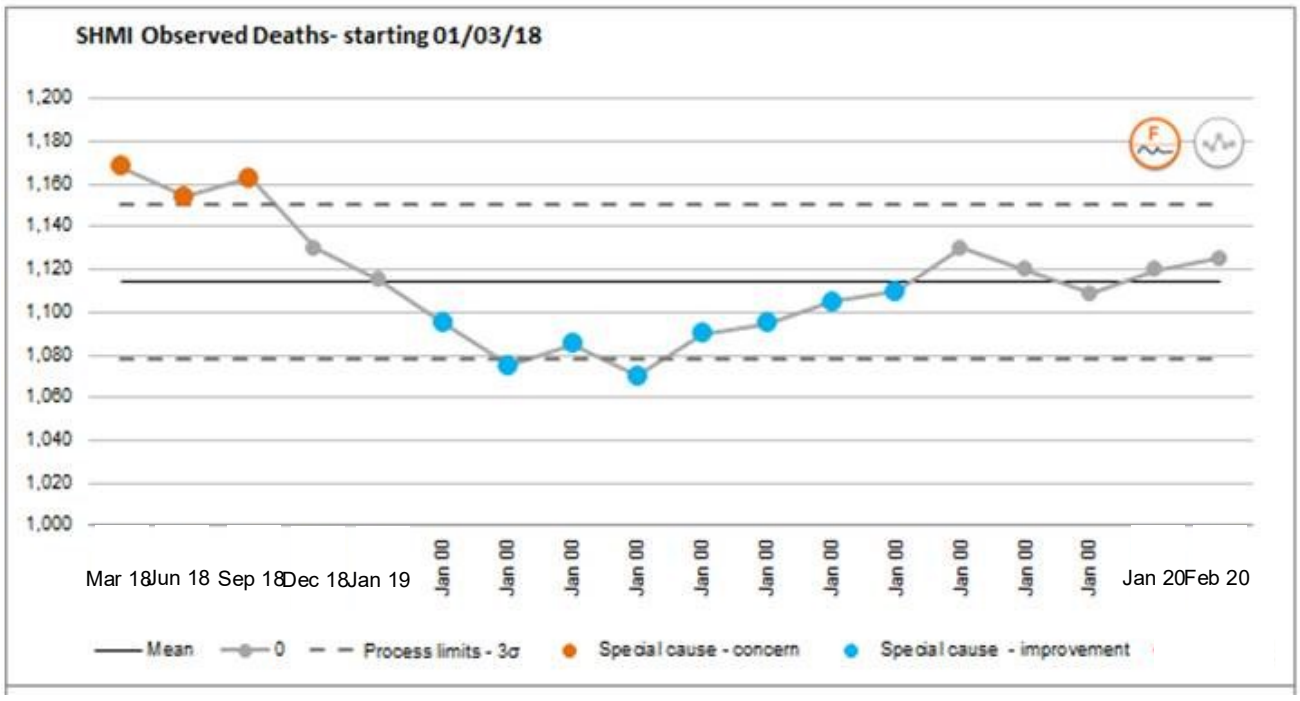
MORTALITY DATA AND STATISTICS

1.1 Summary Hospital-level Mortality Indicator (SHMI)

SHMI is provided by NHS Digital for a 12 month rolling period, and usually 5 months in arrears. It takes into account all diagnostic groups and in hospital deaths, and also deaths occurring within 30 days of discharge from hospital. The SHMI for the rolling years from October 2019 through to February 2020 has been reducing such that the latest figure is now within the expected range at 1.1384 (Feb 2020) which represents its lowest level (bar one month) since June 2015. Changes to staffing and development within the coding department came into effect in October 2019.

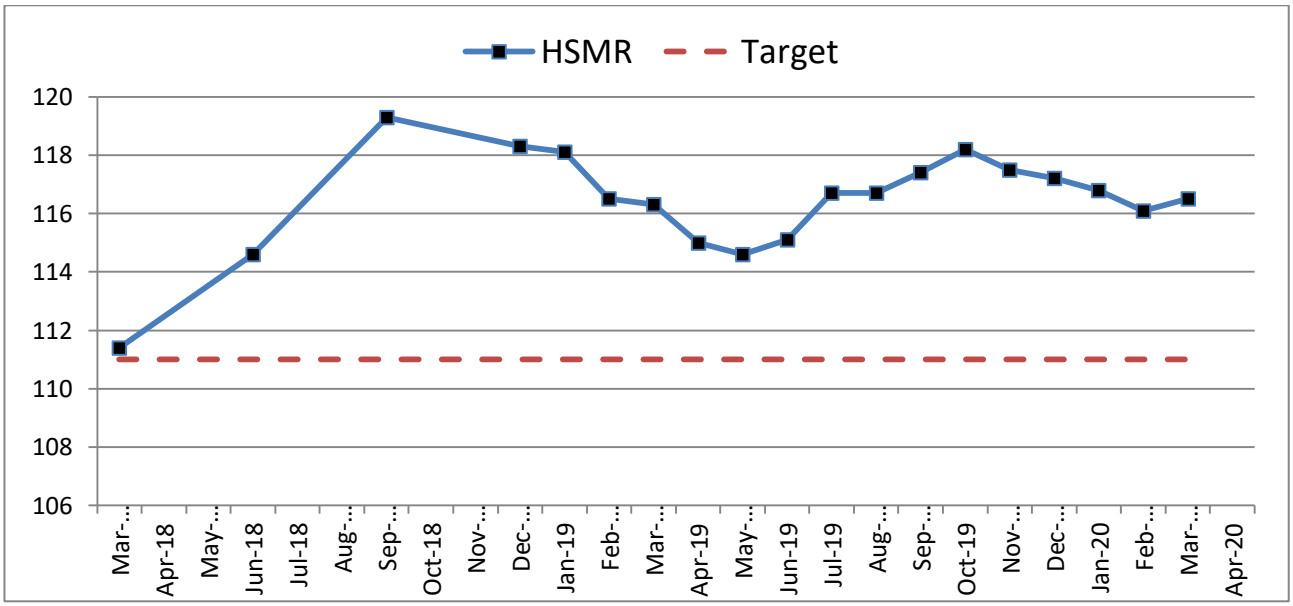


SHMI is calculated by comparing the ratio of observed (actual) deaths in a 12 month period to the expected deaths (predicted from coding data). The SPC below shows observed deaths over the past 2 years (rolling years from March 2018 to Feb 2020). Time axis is not to scale because NHS Digital switched from quarterly to monthly reporting in January 2019.



1.2 HSMR – rolling year to March 2020

The HSMR remains statistically significantly higher than expected, at 116.5 (March 2020). Compared to all acute, non-specialist Trusts across the UK, the Trust is one of 50 with a statistically significantly higher than expected HSMR (HSMR range 106 – 129). SHMI has largely replaced HSMR which is not reported by NHS Digital.



2.0 OTHER INDICATORS OF CARE

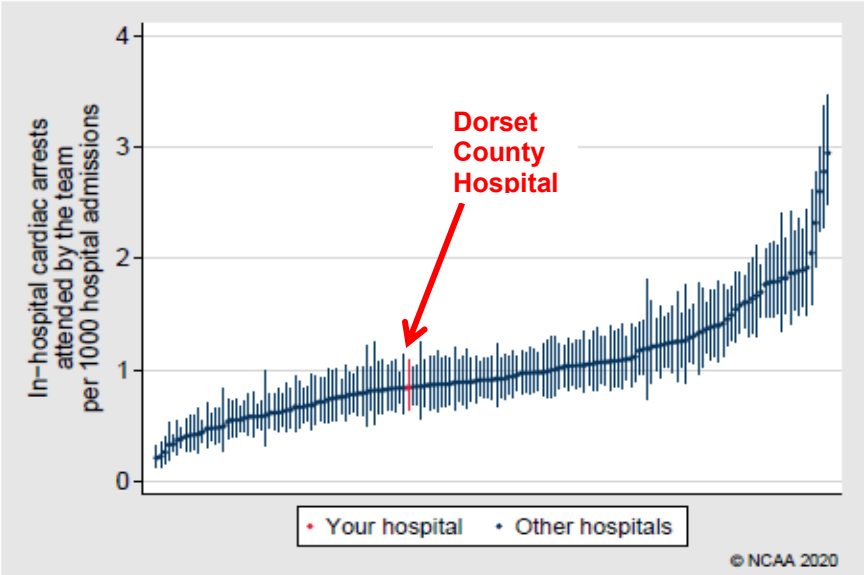
The DCH Learning from Deaths Mortality Group regularly examines any other data which might relate to standards of care, and has continued to meet on a monthly basis throughout the COVID-19 crisis. The following sections report data available from various national bodies who report on individual Trust performance. For other metrics of care including complaints responses, sepsis data (on screening and 1 hour for antibiotic administration), AKI, VTE, patient deterioration and DNACPR data, please see the Quality Report presented on a monthly basis to Quality Committee by the Director of Nursing.

2.1 NCAA Cardiac Arrest data published June 2020

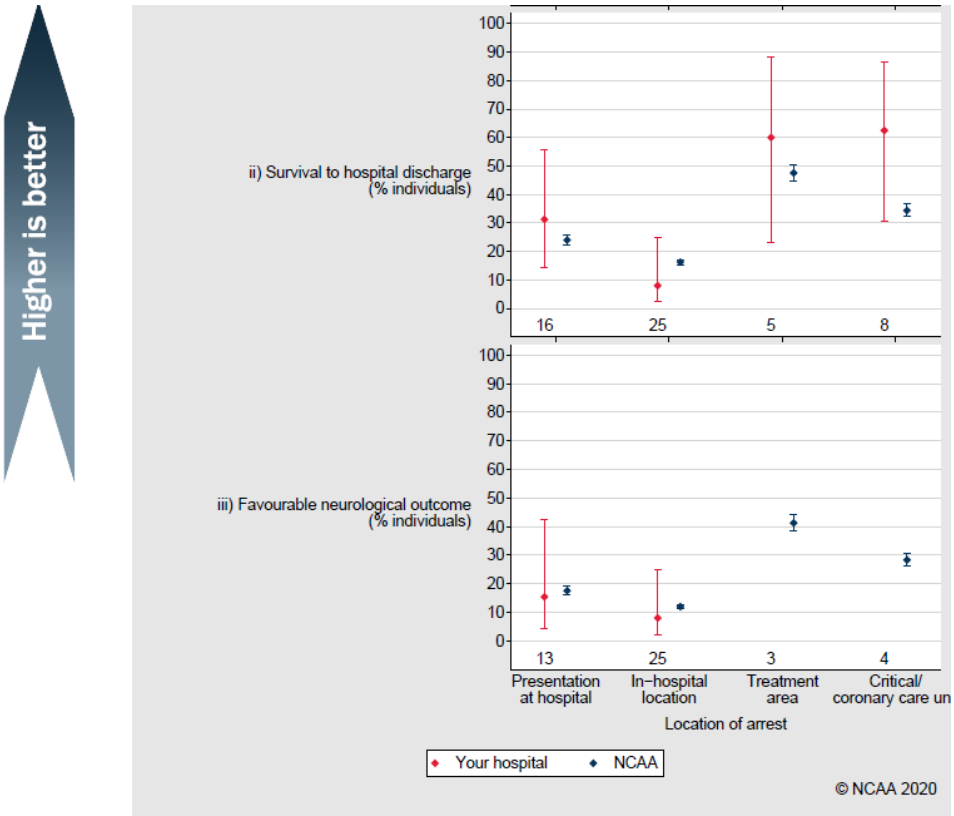
12 month Cardiac Arrest data for 01 April 2019 to 31 March 2020 was published in June 2020. 58 cardiac arrests were attended by the arrest team in this time. A proportion of in-hospital cardiac arrests are probably preventable, therefore the number per 1,000 admissions is a guide to quality of monitoring and intervention in deteriorating patients.

Rate of in-hospital cardiac arrests

The following graph presents the reported number of in-hospital cardiac arrests attended by the team per 1,000 hospital admissions for adult, acute hospitals in NCAA.



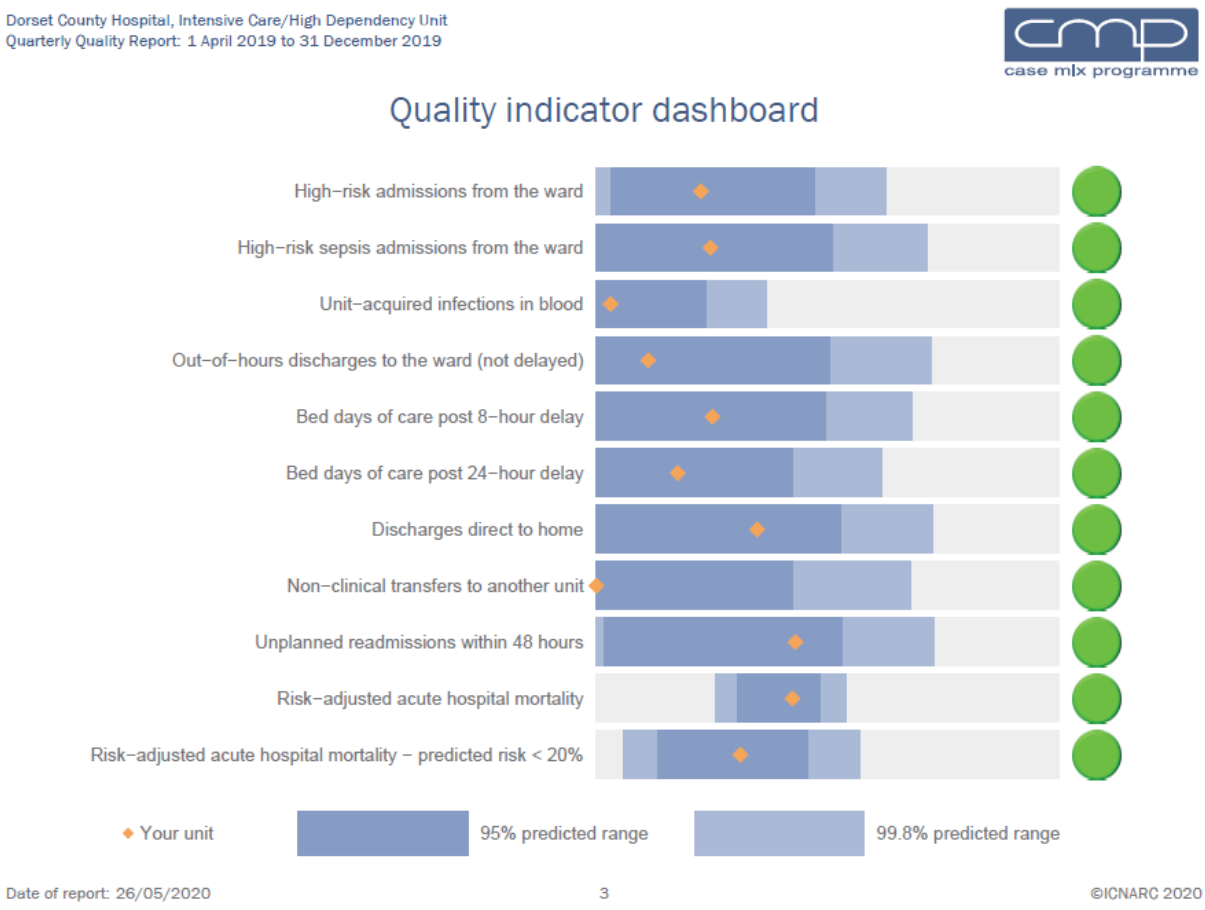
Cardia Arrest survival vs national averages by location of arrest



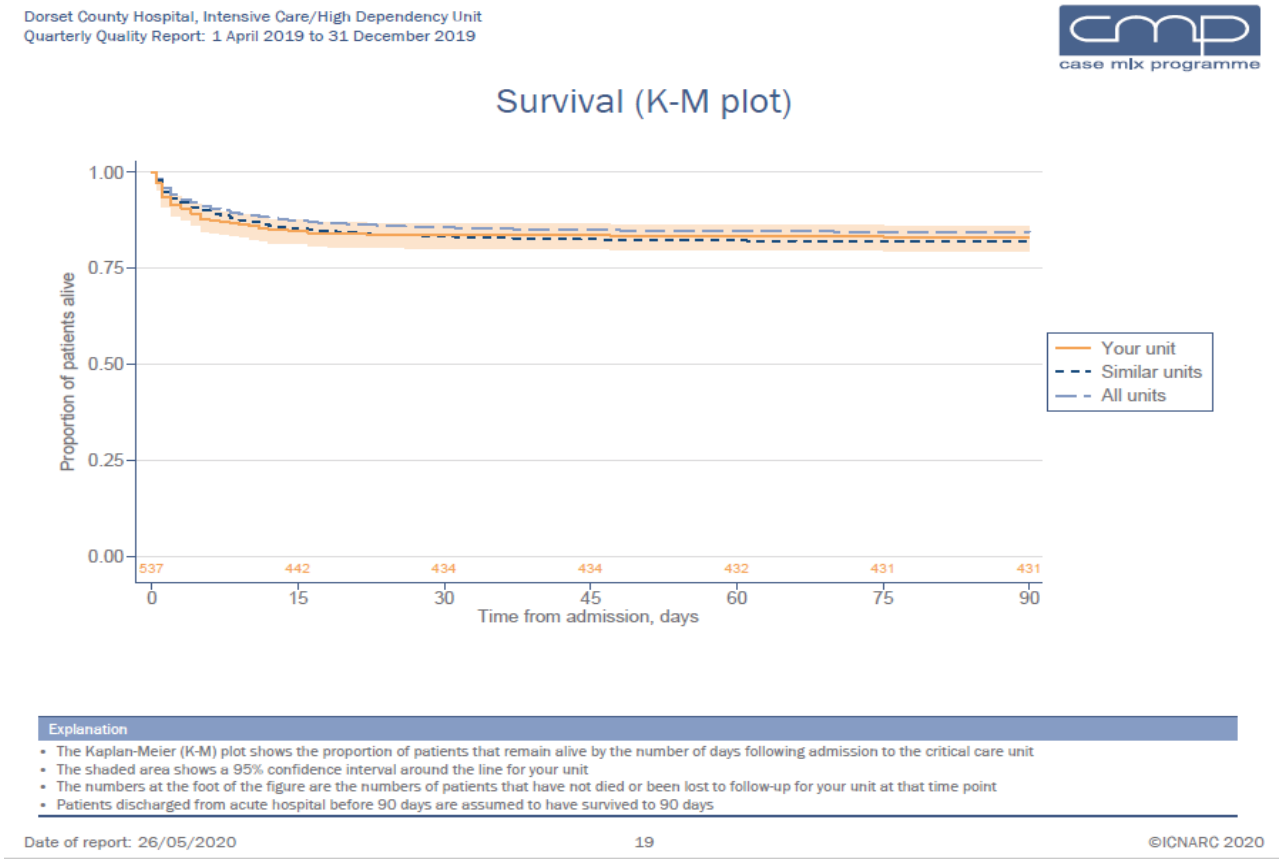
2.2 Pneumonia mortality latest data - published November 2019

Results Summary		Dorset County Hospital	National results
Patient Characteristics and Diagnosis		**n = 88**	**n = 10174**
Gender	Male Female	43% 57%	48% 52%
Age	Median (IQR)	78 (61-84)	75 (61-85)
Cohort Severity (CURB65 score)	0-1 2 3-5	42% 31% 27%	47% 29% 24%
Inpatient mortality	Proportion deceased	7%	10%
Length of stay (discharged patients)	Median in days	3	5
Critical care admission	Yes - proportion	2%	5%
Readmission	Yes - proportion	8%	13%

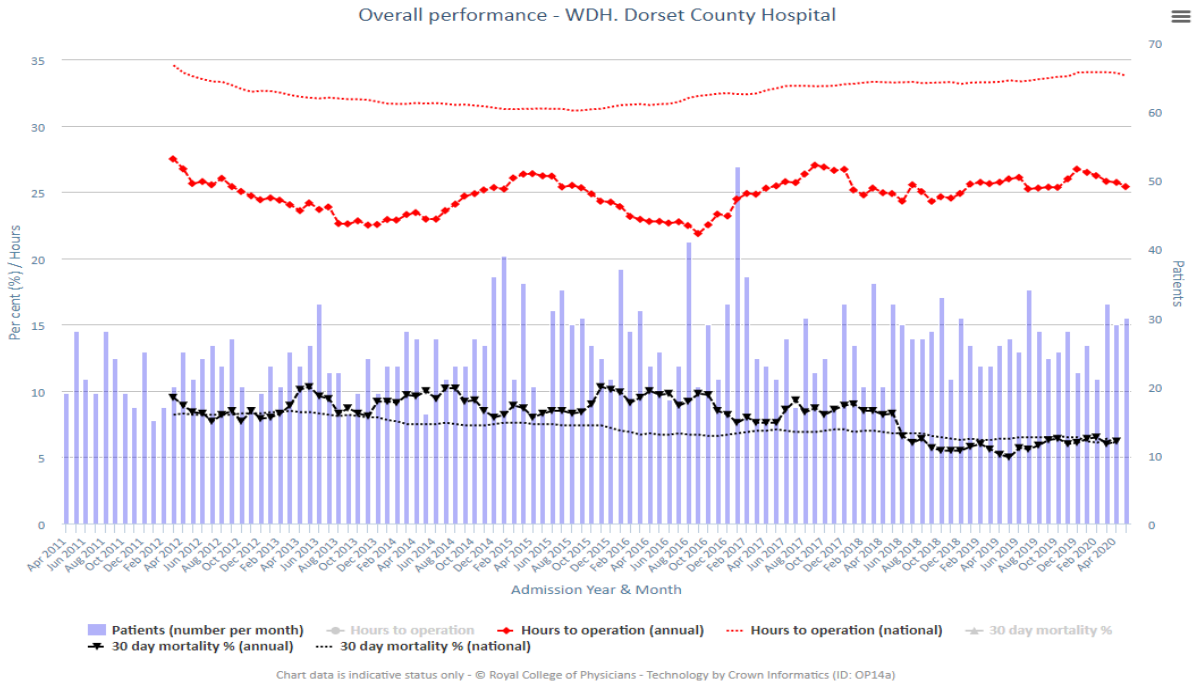
2.3 ICNARC Intensive Care survival data published 26 May 2020



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 our unit



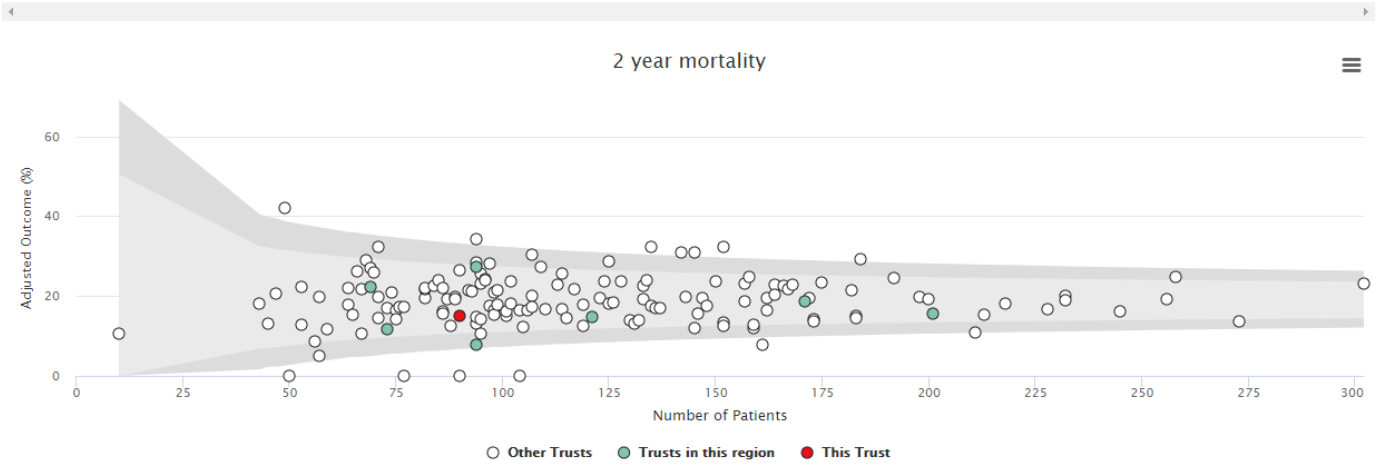
2.5 National Hip Fracture database to April 2020



Time from admission to operation remains significantly better than the national average, with 30 day mortality at 6.2% versus the national average of 6.0%.

2.6 National Bowel Cancer Annual audit

No new data as yet this year - graph below shows latest available data for 2017/18 – 2 year survival compared to all other NHS Trusts.



Trust	Number	Adjusted	Observed
Dorset County Hospital NHS Foundation Trust	90	15.1%	15.6%

2.7 Getting it Right First-Time reviews in Q1

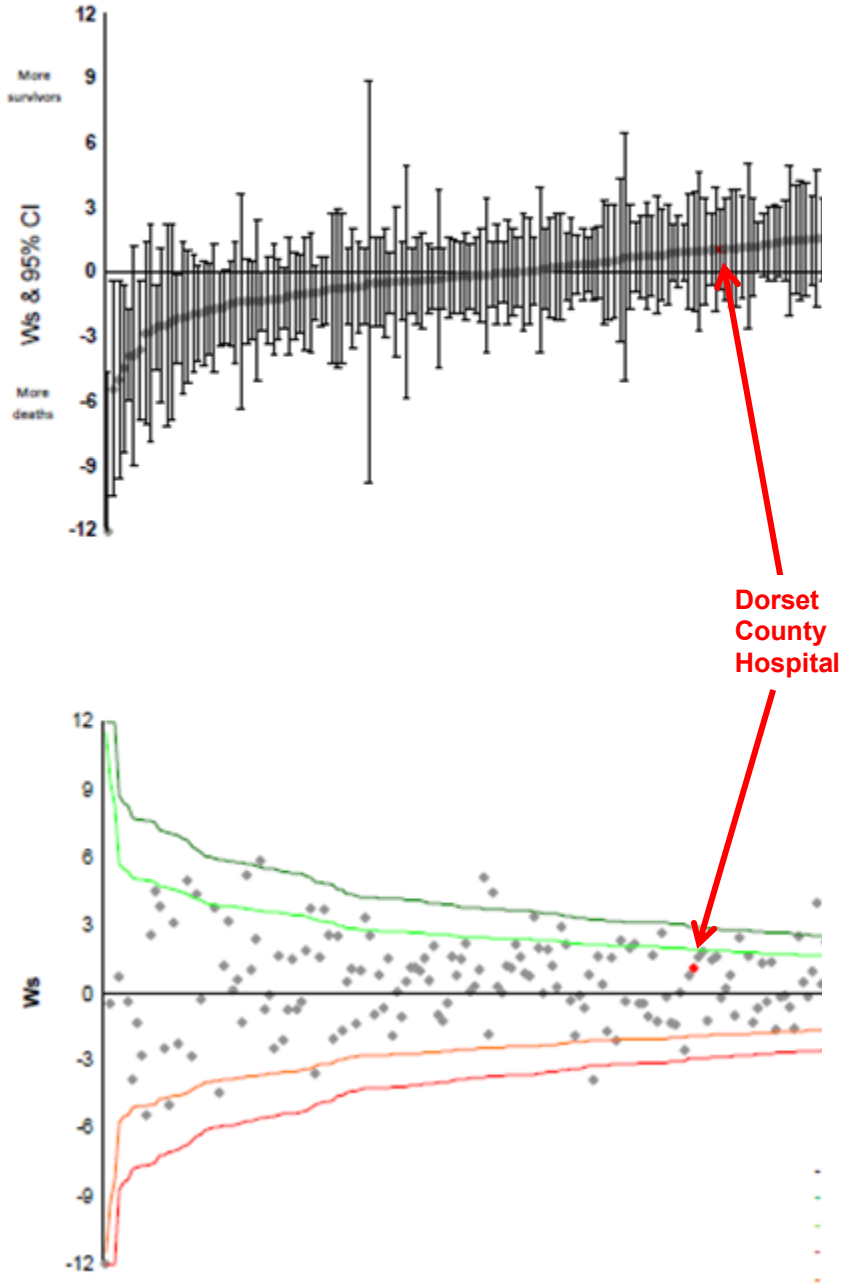
No GIRFT reviews were undertaken at DCH during this quarter, and from March 2020 all future visits were suspended because of COVID-19.

Full reports from previous GIRFT visits are available, and feedback from each review has previously been very positive. Action plans have been developed and are being worked through at present.

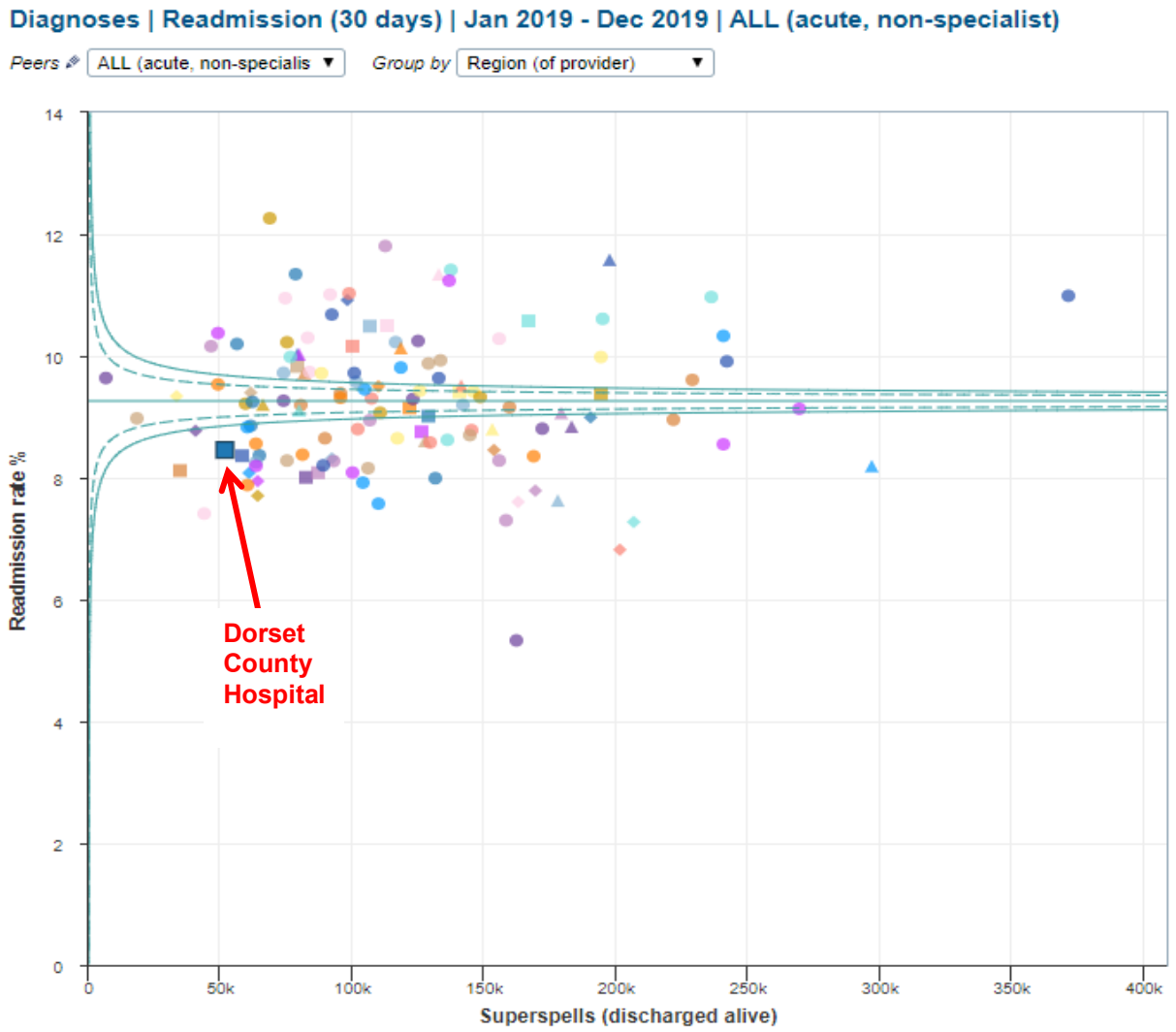
2.8 Trauma Audit and Research Network

DCH is a designated Trauma Unit (TU) and provides care for most injured patients has an active, effective trauma Quality Improvement programme. It submits data on a regular basis to TARN which then enables comparison with other TUs. A summary of the latest published data is shown below, and in both graphs higher is better.

TARN registered sites (excluding Major Trauma Centres)
Comparative Outcome Analysis - 01 January 2018 to 31 December 2019
Outcome at 30 days or discharge
Dorset County Hospital is highlighted
The Ws must be reviewed in conjunction with the Data Completeness and Accreditation figures.



2.9 Readmission to hospital within 30 days, latest available data (Dr Foster) – lower is better



2.10 Dr Foster Safety Dashboard

The Dr Foster safety dashboard compares DCH with other England and Wales Trusts for a variety of complications that might occur during their in-patient stay. Where the confidence intervals include the national mean there is no difference from the national average). DCH has a higher caesarean section rate than expected (7 versus 2) and a lower number of decubitus (pressure) ulcers (204 versus 269). In this latest data "Deaths in Low Risk diagnosis groups" has also shown an alert and each of these 17 cases is now undergoing an SJR. Preliminary data suggests that the diagnosis group is incorrect in several of these cases, and the full findings will be presented to the Hospital Learning from Deaths Mortality Group and included in the next quarterly report.

Quality Safety

Patient Safety Indicators

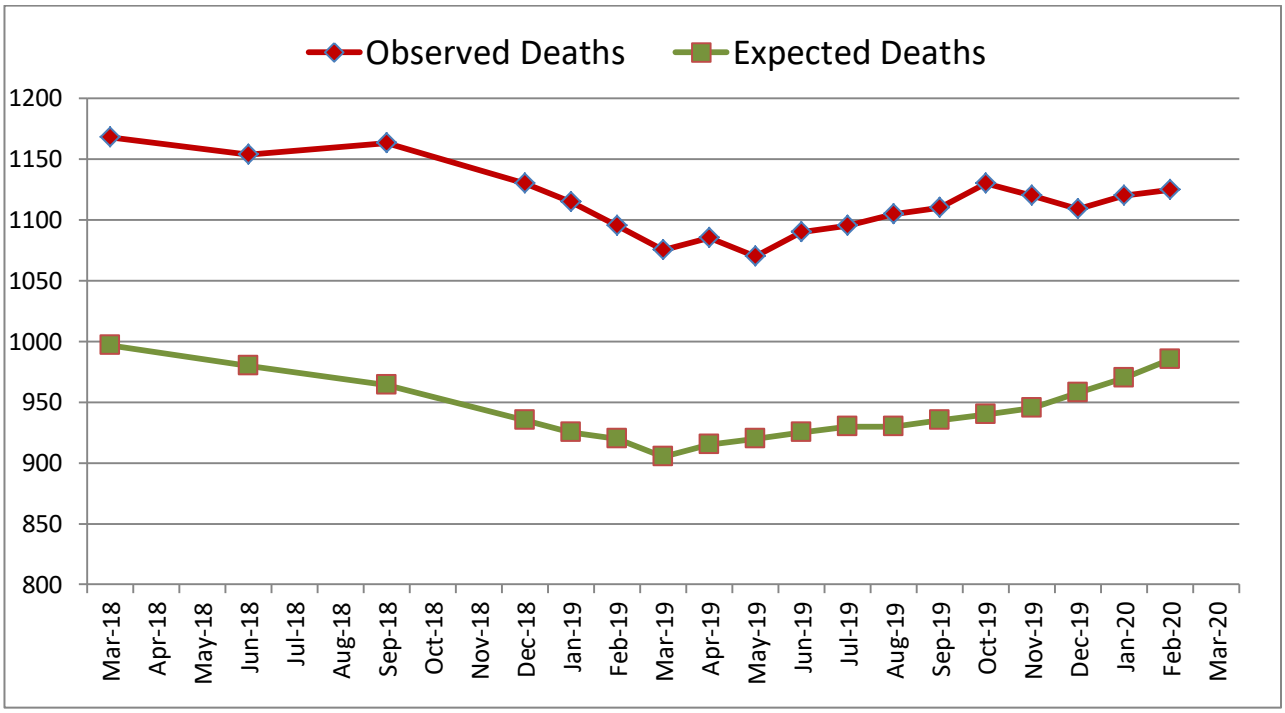
Period: 12 months (Apr 19 to Mar 20) | Data lag: No lag

Indicator	Volume	Observed	Expected	Obs rate/k	Exp rate/k	Relative risk	Compare
Accidental puncture or laceration	41170	62	65.1	1.5	1.6	95.3	
Deaths after surgery	231	21	15.8	90.9	68.3	133.1	
Deaths in low-risk diagnosis groups	21422	17	9.4	0.8	0.4	181.6	
Decubitus ulcer	4906	204	269.0	41.6	54.8	75.8	
Infections associated with central line	7715	0	0.5	0	0.1	0.0	
Obstetric trauma - caesarean delivery	419	7	1.8	16.7	4.4	383.9	
Obstetric trauma - vaginal delivery with instrument	134	9	9.0	67.2	67.1	100.1	
Obstetric trauma - vaginal delivery without instrument	789	20	22.6	25.3	28.6	88.6	
Postoperative haemorrhage or haematoma	16257	5	5.7	0.3	0.4	87.1	
Postoperative hip fracture	21303	1	1.2	0.0	0.1	86.9	
Postoperative physiologic and metabolic derangement	14194	2	1.9	0.1	0.1	105.2	
Postoperative pulmonary embolism or deep vein thrombosis	16395	39	37.5	2.4	2.3	104.1	
Postoperative respiratory failure	13098	9	10.2	0.7	0.8	88.2	
Postoperative sepsis	289	1	4.0	3.5	13.9	24.9	
Postoperative wound dehiscence	431	0	0.3	0	0.8	0.0	

3.0 CODING

3.1 Depth of coding

The DCH depth of coding for Charlson Co-morbidities remains around the lowest in the country. However the Trust's expected death rate has been rising over the past 10 months suggesting that coding accuracy overall is probably improving. The graph below plots Observed (actual) deaths and Expected deaths against rolling 12 month time points.



3.2 PWC Artificial Intelligence

PWC have produced an AI model to assist Trusts in understanding technical issues relating to elevated HSMR and SHMI figures. Initial discussions with PWC were halted on grounds of cost in 2019, but during Q4 these were restarted after a reduced price offer and discussions between the Medical Directors of DCH and The Royal Wolverhampton Trust (a current client of PWC). RWT were very complimentary about PWC's assistance which they feel is largely responsible for their SHMI improvement over the past 12 months from the highest in the country to well within the expected range for the past 3 published months of data.

Discussions within the Executive Team led to a request for PWC to submit an options paper for future collaboration and pricing, which has been accepted in principle and is being passed to Procurement.

4.0 LEARNING FROM DEATHS

4.1 Structured Judgement Reviews

Although the Hospital mortality Group has continued to meet (virtually) over the past 4 months, work on SJRs was temporarily suspended (as in all Trusts), and so as noted in the previous quarterly report it has not been possible to collate accurate data. It is intended that the next Quarterly Report will include this omitted data.

4.2 Working with Families

The End of Life team have co-designed improved information leaflets to bereaved families. All bereaved relatives now have the opportunity to discuss their relative's death with a Medical Examiner. Since the early weeks of the CoVID-19 crisis the Medical Examiner numbers were reduced to 2 and more recently 3, but they continue to provide a full 5 days service between them. It is anticipated that other Medical Examiners will return in the coming weeks as COVID has subsided.

5.0 QUALITY IMPROVEMENT ARISING FROM SJRs

The following themes have been identified from SJRs and are being translated into quality improvement projects:
1. Recognition and management of AKI
2. Poor quality of some admission clerking notes, particularly in surgery
3. Morbidity and Mortality meetings - standardization and governance (see 6.0 below)

6.0 MORBIDITY and MORTALITY MEETINGS

Dr. Alison Cooper has returned to DCH as an Associate Medical Director for 1 day per week, with responsibility for M&M meeting governance. She commenced in post on 02/07/20. All departmental Clinical Leads have been asked to ensure that M&M meetings are continuing on a regular basis during the CoVID-19 pandemic (depending on the number deaths within each department), using the Royal College of Surgeons M&M meeting Best Practice document as their template.

7.0 LEARNING FROM CORONER'S INQUESTS

DCH has been notified of 19 new Coroner's inquests being opened in the period 01.04.20 – 30.06.20. All Inquests that were listed have been adjourned until September 2020 because of COVID-19. Therefore we currently have 51 open Inquests. The Coroner has reviewed all outstanding cases to decide whether any can be heard as documentary hearings. Six cases have been heard. New cases are now being listed for September onwards.

A virtual meeting has been arranged by the Coroner w/c 13.07.20 to review their current position and to discuss how Inquest hearings will be held in future and to consider whether holding virtual Inquests is an option.

8.0 SUMMARY

SHMI and HSMR remain higher than expected, but with evidence of a steady improvement in SHMI over the past 4 months, to its best figure for around 2 years. No other metrics of in-patient care suggest that excess mortality is occurring at DCH.

Nevertheless the Hospital Mortality Group remains vigilant and will continue to scrutinise and interrogate all available data to confirm or refute this statement on a month by month basis. At the same time internal processes around the completion of SJRs and Learning from Deaths are being improved and this will be facilitated by the appointment of an Associate Medical Director with responsibility for governance of M&M meetings from 02/07/2020, and the anticipated engagement of PWC to provide additional advice around mortality metrics in general and coding specifically.