| Title of Meeting	**Board of Directors**
Date of Meeting	**25 November 2020**
Report Title	**Mortality Report: Learning from deaths Qtr 2 2020/21**
Author	Prof. Alastair Hutchison, Medical Director
Responsible Executive	Prof. Alastair Hutchison, Medical Director

2.0   NATIONAL MORTALITY METRICS

2.1 Summary Hospital-level Mortality Indicator (SHMI)

SHMI is provided by NHS Digital for a 12 month rolling period, and 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 March 2020 had been reducing but the latest figure has risen slightly to 1.145 (Apr 2020) which takes it back into the 'higher than expected' range. Coding during March and April was interrupted by the majority of coders being unable to work on site, and DCH not yet having an electronic patient record to access.
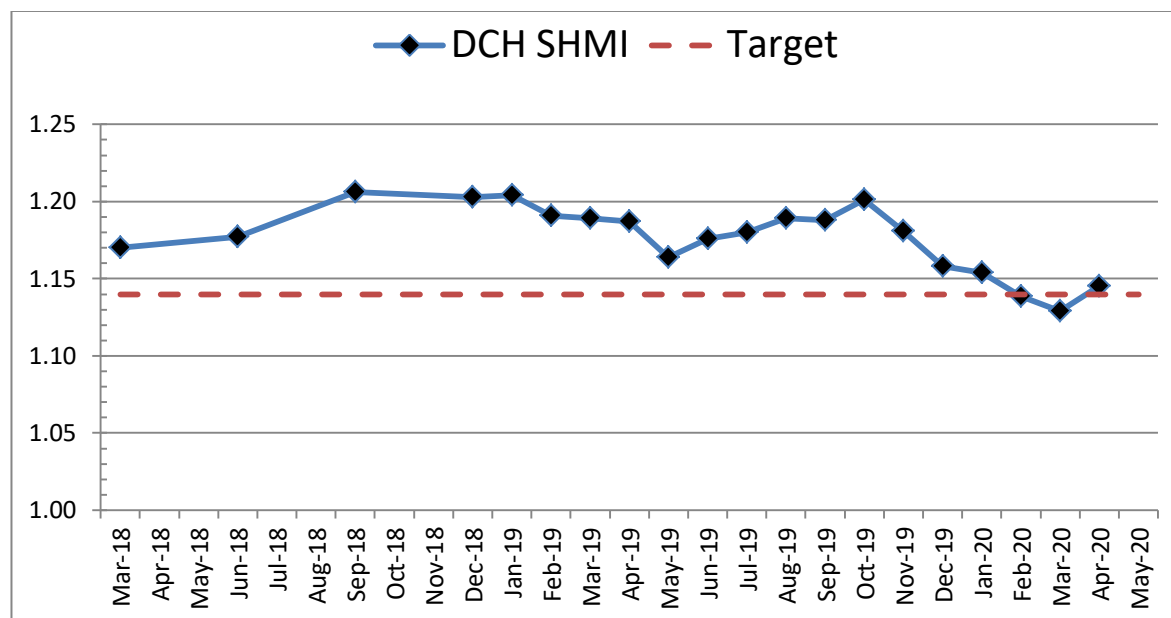

SHMI is calculated by comparing the number of observed (actual) deaths in a rolling 12 month period to the expected deaths (predicted from coding data). The chart below shows observed and expected deaths (predicted based on DCH coding) over the past 2 years (rolling years from March 18 to April 20).
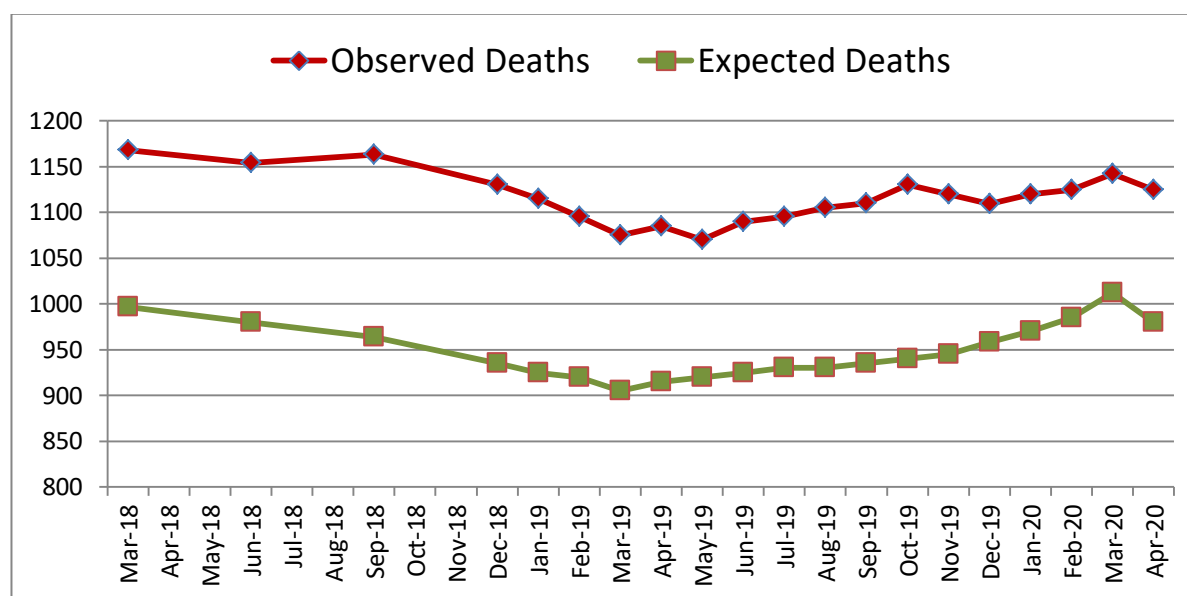
3.0 OTHER NATIONAL AUDITS/INDICATORS OF CARE

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, patient deterioration and DNACPR data, please see the Quality Report presented on a monthly basis to Quality Committee by the Director of Nursing. DCH VTE risk assessments reached 94% in August and achieved the 95% target for September 2020.
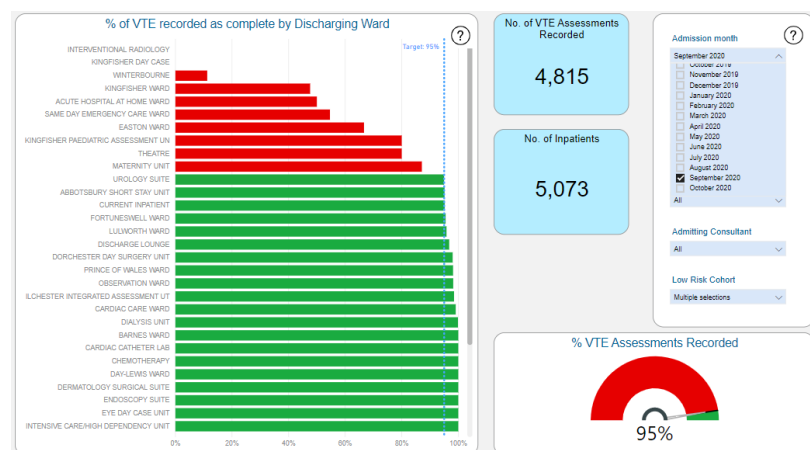
3.1 NCAA Cardiac Arrest data

12 month Cardiac Arrest data for 01 April 2019 to 31 March 2020 was published in June 2020, and included in the previous Q1 report. The next data publication is due in November 2020.

3.2 National Adult Community Acquired Pneumonia Audit latest data - published November 2019

Results Summary		Dorset County Hospital	National results
Patient Characteristics and Diagnosis		**n = 88**	**n = 10174**
Gender	Male	43%	48%
	Female	57%	52%
Age	Median (IQR)	78 (61-84)	75 (61-85)
Cohort Severity (CURB65 score)	0-1	42%	47%
	2	31%	29%
	3-5	27%	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%

3.3 ICNARC Intensive Care survival latest data published 30 June 2020

Dorset County Hospital, Intensive Care/High Dependency Unit
Quarterly Quality Report: 1 April 2019 to 31 March 2020

cmp
case mix programme

Quality indicator dashboard
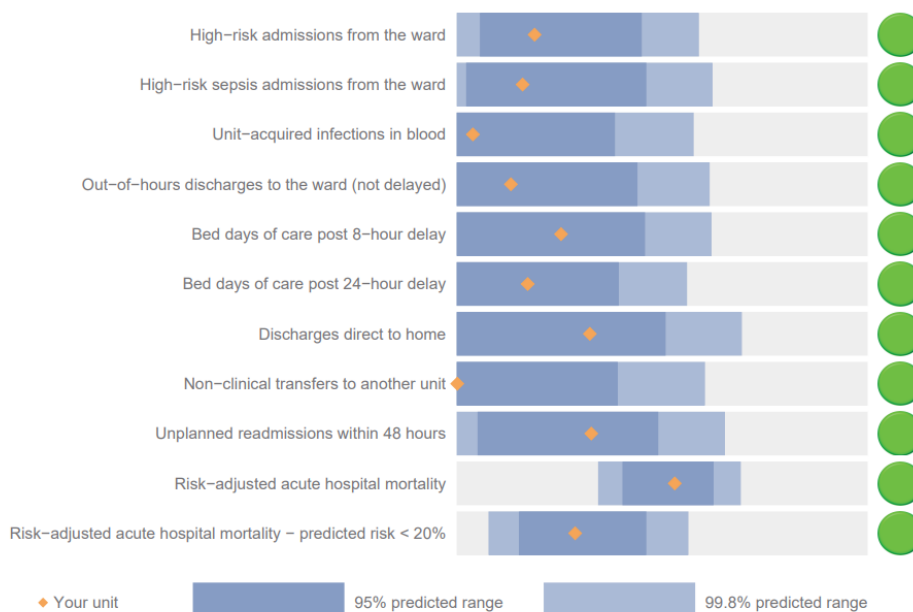
The chart below shows the "risk adjusted acute hospital mortality" following admission to the critical care unit. It compares observed and expected death rates in a similar fashion to SHMI.
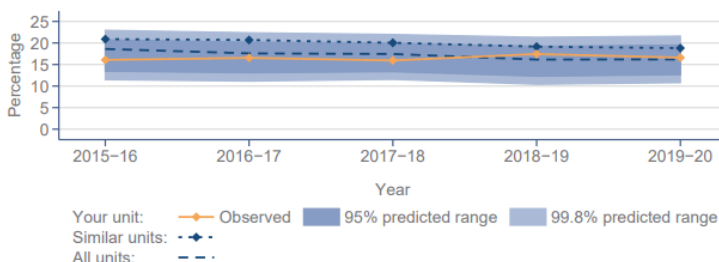
Dorset County Hospital, Intensive Care/High Dependency Unit
Quarterly Quality Report: 1 April 2019 to 31 March 2020

cmp
case mix programme

Risk-adjusted acute hospital mortality
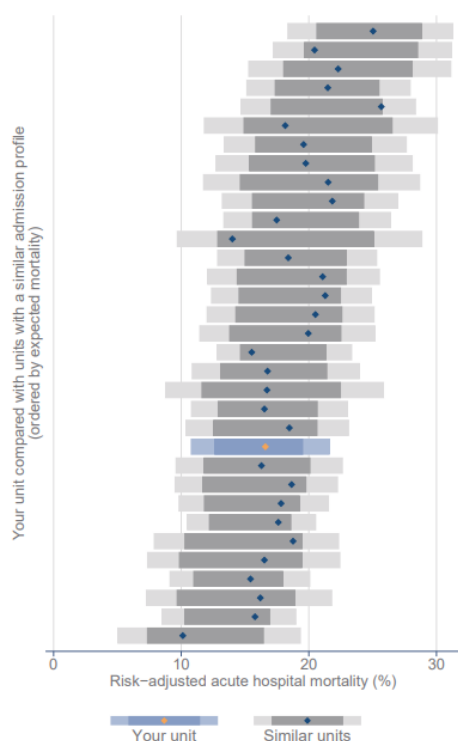
	N	Eligible	Observed percentage	Expected percentage	95% predicted range	99.8% predicted range	
Quarter 1	177	165	16.4	17.6	(11.7, 23.3)	(8.7, 27.0)	🟢
Quarter 2	179	170	17.1	14.5	(9.1, 19.7)	(6.5, 23.1)	🟢
Quarter 3	202	202	17.3	15.5	(10.4, 20.4)	(7.9, 23.6)	🟢
Quarter 4	175	174	15.5	17.0	(8.7, 24.9)	(4.7, 30.1)	🟢
Full year	733	711	16.6	16.1	(12.6, 19.5)	(10.8, 21.6)	🟢

Your unit: Observed — 95% predicted range — 99.8% predicted range
Similar units: —◆—
All units: - - -

Definition
- Eligible: All critical care unit admissions, excluding readmissions, patients dead on admission and those admitted to facilitate organ donation
- Observed percentage: The percentage of eligible admissions that died before ultimate discharge from acute hospital
- Expected percentage: The expected percentage of acute hospital deaths among eligible admissions, calculated as the mean predicted risk of death from the $ICNARC_{H-2018}$ model for 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

3.5 National Hip Fracture database to June 2020
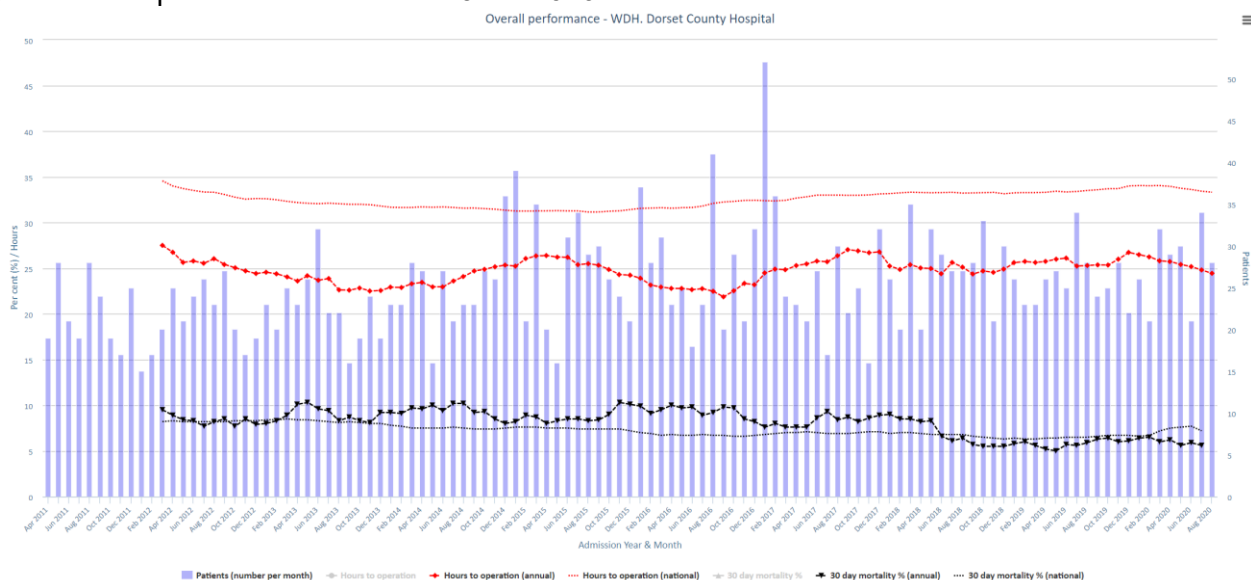
Time from admission to operation remains significantly better than the national average (25.2 vs 33.6 hours), with 30 day mortality at 5.9% versus the national average of 7.7%.

3.6 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.
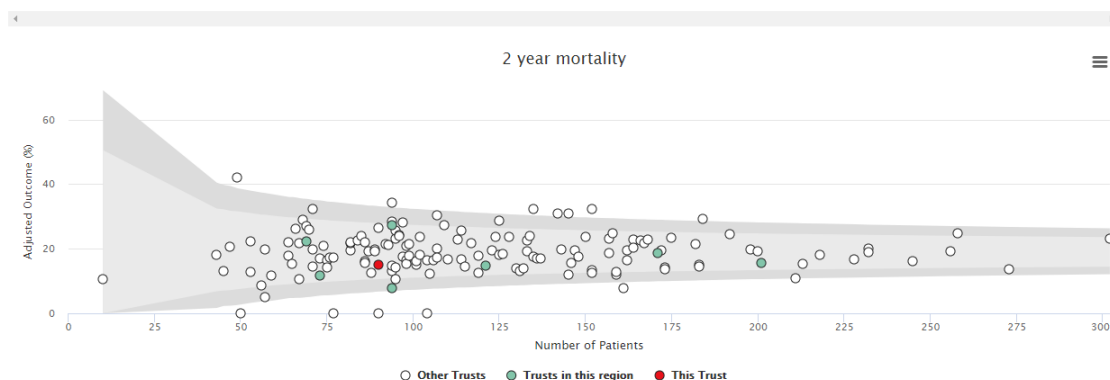
Trust	Number	Adjusted	Observed
Dorset County Hospital NHS Foundation Trust	90	15.1%	15.6%

3.7 Getting it Right First-Time reviews in Q1

No GIRFT reviews were undertaken at DCH during this quarter. Since March 2020 all visits were suspended because of COVID-19. Virtual visits are expected restart in Q3, subject to COVID wave 2.

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.

3.8 Trauma Audit and Research Network

DCH is a designated Trauma Unit (TU) providing care for most injured patients, and 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 (to 31st May 2020) is shown below, and in both graphs higher is better:

The Trauma Audit & Research Network

Dorset County Hospital
TARN registered sites (excluding Major Trauma Centres)
Comparative Outcome Analysis – 01 June 2018 to 31 May 2020
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.

Dorset County Hospital

- Average Ws
- 3 SD from the mean (positive)
- 2 SD from the mean (positive)
- 3 SD from the mean (negative)
- 2 SD from the mean (negative)

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

Diagnoses | Readmission (30 days) | Apr 2019 - Mar 2020 | ALL (acute, non-specialist)
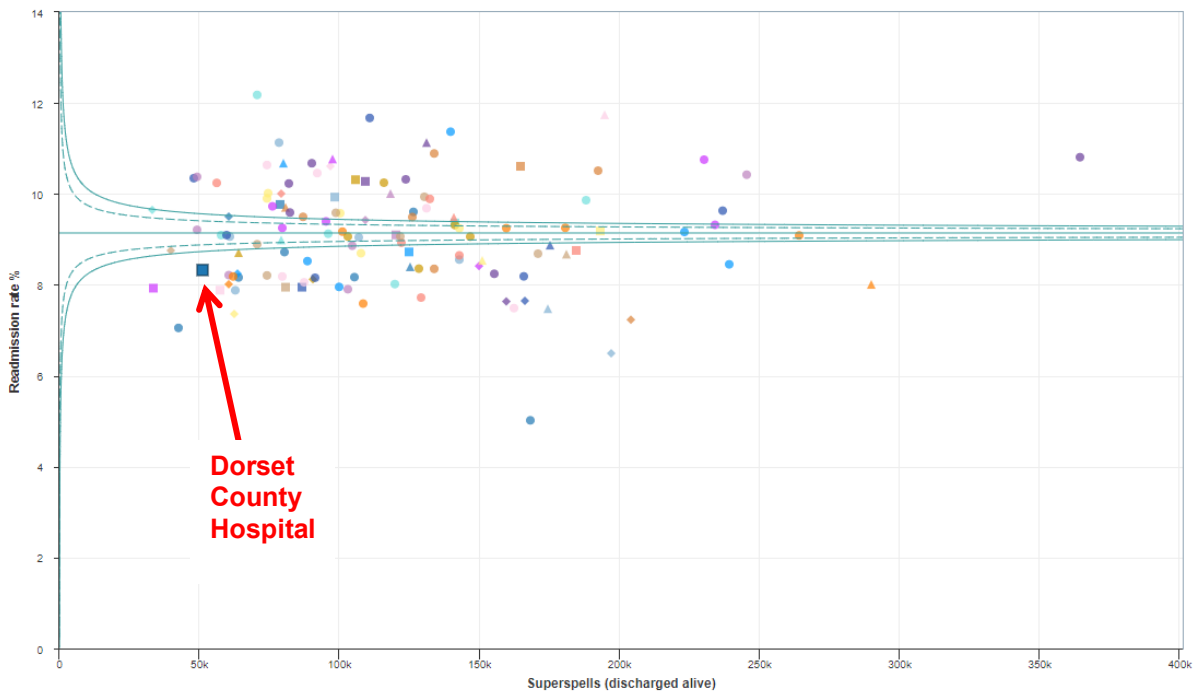
3.10 Dr Foster Safety Dashboard

This 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 (209 versus 242). In this latest data "Deaths in Low Risk diagnosis groups" has also shown an alert and each of these cases is undergoing an SJR. Preliminary data suggests that the diagnosis group is incorrect in several of these cases but a full analysis is awaited.

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	

4.0 CODING

4.1 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 had been rising over the past 12 months suggesting that coding accuracy overall is probably improving. The figure for the rolling year to April has dropped, and may in part reflect unpredictable changes resulting from COVID. The graph below plots Observed (actual) deaths and Expected deaths against rolling 12 month time points.
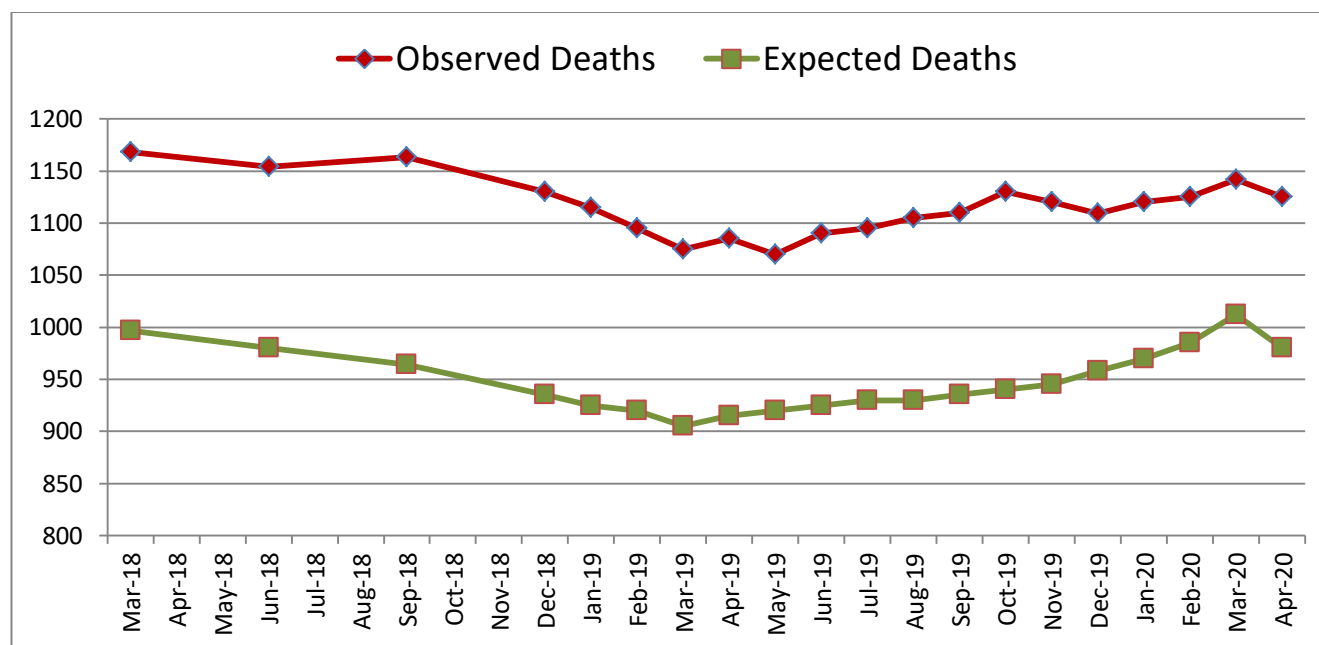
4.2 PWC Artificial Intelligence

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, but PWC have recently indicated that they may no longer be able to provide this service.

5.0 QUALITY IMPROVEMENT ARISING FROM SJRs

The following themes have been previously 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.

See appendices:

1. M&M Agenda template

2. M&M Case selection template

7.0 LEARNING FROM CORONER'S INQUESTS

DCH has been notified of 9 new Coroner's inquests being opened in the period 01.07.20 – 30.09.20. All Inquests that were listed were adjourned due to CoVID-19 restrictions. Cases have been listed for Pre Inquest Review hearings in October 2020, which it is hoped can be undertaken virtually where the family or the staff has no objection. We have undertaken one Pre Inquest Review via this route in September, and attended one at Court as that was the family's preference.

We currently have 46 open Inquests. The Coroner has reviewed all outstanding cases to decide whether any can be heard as documentary hearings. 2 inquests were heard as Documentary hearings in quarter 2.

We continue to work with the Coroner's office, and will continue to support staff at these hearings. We now have a virtual court room set up within Trust Headquarters so that staff can attend inquests virtually. Free training has previously been provided, via our Trust Solicitors, around Inquest Hearings and statement writing which was well attended by a variety of staff groups. We will consider re-running some of these courses to assist with the change in processes in holding hearings virtually.

8.0 LEARNING FROM CLAIMS

See appendix 3

9.0 SUMMARY

SHMI remains higher than expected, but with evidence of a clear trend to improvement over the past 6 (arguably 24) months. 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 and recording of SJRs, M&M meetings and Learning from Deaths are being improved, and for the first time this report includes Divisional descriptions of their progress.