Trust Board Paper H

Meeting title:	Trust Board
Date of the meeting:	12th December 2024
Title:	Uhl Mortality and Learning from Deaths Quarterly Report
Report presented by:	Gang Xu, Deputy Medical Director
Report written by:	Rebecca Brougton, Head of Learning from Deaths and Clare Collins, Associate Medical Director

Action – this paper is for:	Decision/Approval		Assurance	x	Update	
Where this report has been discussed previously	Quality Committee					

To your knowledge, does the report provide assurance or mitigate any significant risks? If yes, please detail which

The UHL Learning from Deaths (LfD) framework provides assurance in respect of both the national risk adjusted mortality measure (SHMI) and also delivery of Death Certification, Medical Examiner (ME) Scrutiny and Case Record Review as per national statutory requirements.

This report provides details of actions being taken in respect of LfD actions relating to the Risk 3961

3961 – ME staffing to meet the requirements for expanding the ME service into primary care (Risk Score 9)

Impact assessment

- Monitoring Quality of Care for patients who die in UHL
- Improving Outcomes of future patients

Acronyms used:
LfD – Learning from Deaths; ME – Medical Examiners; MCCD – Medical Certification of Cause of Death; SJR – Structured Judgement Review (Case Record Review)' SHMI – Summary Hospital Mortality Index (all inpatient deaths and deaths within 30 days of discharge to the community setting); HSMR – Hospital Standardised Mortality Ration (56 diagnosis groups in hospital deaths); CUSUM - Cumulative Sum Control Charts; NICOR (the national cardiac surgery audit data); PSII Patient Safety Incident Investigation

Purpose of the Report

To receive an update on UHL's Mortality Rates and Learning from Deaths programme which includes

- Bereavement Services Office – Death Certification
- Medical Examiner Process – both within UHL and across the Leicester, Leicestershire and Rutland (LLR) Healthcare System
- Bereavement Support Service
- Specialty Mortality Reviews using the national Structured Judgement Review tool
- LLR Child Death Overview Panel reviews and Perinatal Mortality Review Group reviews using the national Perinatal Mortality Review Tool
- Clinical Team reviews and reflections

Summary

The board is asked to be assured by actions taken including:

- Monitoring of our crude and risk adjusted mortality rates and to be advised of any diagnostic or procedure groups with an 'above expected' relative risk identified by DrFoster.
- Ongoing work to meet the Statutory requirements in respect of the expanded Medical Examiner process implemented across all of Leicester, Leicestershire and Rutland (LLR) from 9th September 2024 and remedial actions being taken to increase capacity within the ME team.
- Carrying out reviews where potential for learning identified by the ME or death meets national criteria and then taking forward actions where appropriate
- Receiving updated reports from the Child Death Overview Panel (CDOP) and neonatal deaths and stillbirths to the Mothers and Babies: Reducing Risk through Audit and Confidential Enquiries group – (MBRRACE)

The authors would welcome feedback on the new format of this report.

Mortality:

UHL's crude mortality rate for the first 4 months of 24/25 still remains low at 0.9%, and lower than comparative peers (Figure 1).

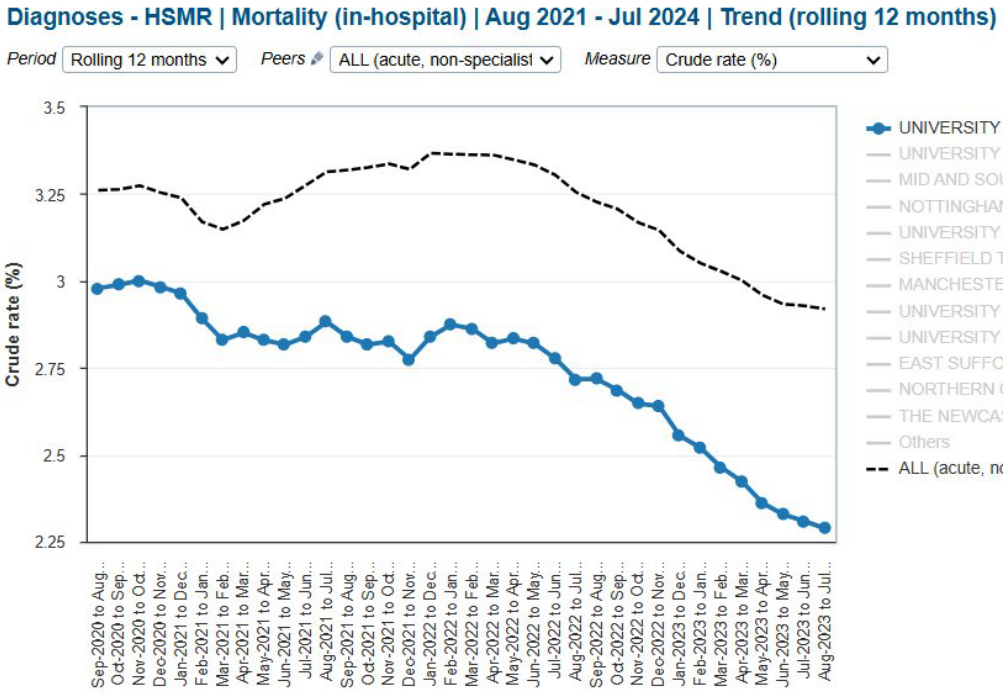


Figure 1: UHL 12-monthly crude mortality rate from 2020 to 2024 compared to peer organisations.

Both risk adjusted indicators (HSMR and SHMI) are in line with the national average (within expected). Our latest HSMR (for the 12 months August 23 to July 24) is 100.7 and our latest SHMI is 98 (for the 12 months July 23 to June 2024.) See Appendix 1, Slides 1 to 3.

DrFoster is introducing a change to the HSMR calculation to include a boarder range of co-morbidities.

Due to our lower than expected depth of coding, our new HSMR figure is expected to have increased by 8.6 points into the 'above expected' band for mortality.

Level of co-morbidity burden is the biggest driving factor for the deterioration in the HSMR+ figure (Figure 2). Full details of the HSMR+ changes are being presented separately to the Committee by our TelstraHealth (DrFoster) Consultant.

Key	Model Iterations	Relative Risk Difference
1	HSMR vs HSMR+	8.60
2	HSMR vs HSMR without palliative	1.90
3	HSMR without palliative vs. HSMR+	7.18
4	Cohort Update	-0.48
5	COVID subgroup	-0.05
6	Deprivation	0.42
7	Comorbidity	5.53
8	Frailty	0.34
9	Palliative care	2.80
10	Modelling	0.01

Figure 2: Data from Telstra (Dr Foster) on most influential factors effecting the HSMR versus HSMR+ mortality risk score.

We continue to undertake further analysis, benchmarking and cross referencing with our Learning from Deaths data any patient or diagnosis groups with an above expected relative risk to identify any areas for improvement in clinical care. For the latest quarter we have asked cardiac services to carry out a deep-dive into treatment of Acute Myocardial Infarction. Dr Foster data has indicated higher than expected mortality in the latest quarter. Myocardial Ischaemia National Audit Project (MINAP) shows UHL cardiac services perform at or better than national targets. Cardiac services will triangulate data from MINAP with Dr Foster, in particular number of co-morbidities recorded and represent to MRC in later 2024/early 2025.

Medical examiners service:

On 9th September the new National Medical Examiner process was launched across all deaths in Leicester, Leicestershire and Rutland. The number of primary care referrals to the ME office has increased from 1 or 2 a day to an average of 20. This has increased the average turnaround time for dealing with each referral. See Appendix 1 Slide 4.

New team members have also required training which has added to pressures. This remains a risk, but the team is actively working to improve processes and communication with primary care teams.

Current actions to mitigate the increased demand on the medical examiner service include

- Increasing the number of Medical Examiners on the busiest days (Tuesdays and Fridays)
- Streamlining the referral process for Non UHL deaths and simplifying the referral template
- Clinical Medical Examiner Officers making more 'explaining the cause of death' calls to the bereaved in order to 'free up' Medical Examiner time for scrutiny
- Liaising with the Funeral Directors to keep the bereaved informed of progress and the ME officers making 'courtesy calls' to the bereaved where delays anticipated
- Clinical ME Officers triaging referrals to anticipate where amendments may need making to the MCCD and to identify/expedite urgent cases (ie faith requests)

Structure Judgement Reviews:

We continue to follow up the outcome of Structured Judgement reviews undertaken by Specialty M&Ms, with particular focus on those SJRs requested as the Medical Examiner felt there may potentially be problems in care.

In the last quarter, no new deaths were more likely than not due to problems in care.

Themes identified from previous quarter remain consistent, with communication between teams the biggest area for improvement. See Appendix 1 – Slide 5.

A report on key themes in respect of learning and actions taken in response to deaths considered to be more likely than not due to problems in care will be presented to the December MRC.

Perinatal mortality:

MRC members also received the latest Quarterly report (Appendix 2) from the Perinatal Mortality Oversight Group (PMOSG) and it was noted that we have seen a higher number of Stillbirths in the last quarter but it is too early to know how this will be reflected in the 'full year' figures. There have not been any immediate concerns raised.

The Chair of the Perinatal Mortality Review Group (PMRG) presented the perinatal mortality quarterly update to MRC; including learning and actions identified through reviews of neonatal deaths and stillbirths for the first 6 months of 2024 (as reported to MBRRACE – Appendix 3).

Members were advised that the fetal medicine report looking at the unique and complex UHL services provided (including level 3 neonatal care, neonatal surgery, paediatric cardiology, ECMO.) did not find any significant issues were identified with respect to the mortality review process of cases reviewed.

Learning from Child death 2023-2024:

MRC members took learning from Annual Child Death report. There was a total of 56 child death in UHL for 2023-24, the majority of children were from the LLR region, and died in hospital.

Many of the themes and actions from report and M&M meetings are inherently connected. For example- lack of appropriate attendance at review meetings (M&M, CDR or MDT) and the lack of a lead consultant for a patient with complex needs.

Learning from reviews done externally (ie other CDOPs) is not reliably fed back to UHL leading to a lack of robust process for sharing and embedding learning.

Identifying action leads and tracking progress can be difficult. We hope that working with a Q&S lead for the CH and the updated action log will help improve the process.

The lead for Child Death has identified short- and medium-term actions including:

- Relaunch of newsletters to help share learning.
- Launching a UHL immediate response meeting for all deaths of non LLR children to help identify concerns and also identify staff to feed into the child's local CDOP process.
- Ensure we follow national processes in the bereavement teams.
- Update Child Death Paperwork in view changes to PM's, new genetic testing and focus on appropriate testing immediately following death when cause unknow.

APPENDIX 1

UHL'S MORTALITY & LEARNING FROM DEATHS SLIDE DECK

NOVEMBER 2024

UHL'S CRUDE IN-PATIENT MORTALITY

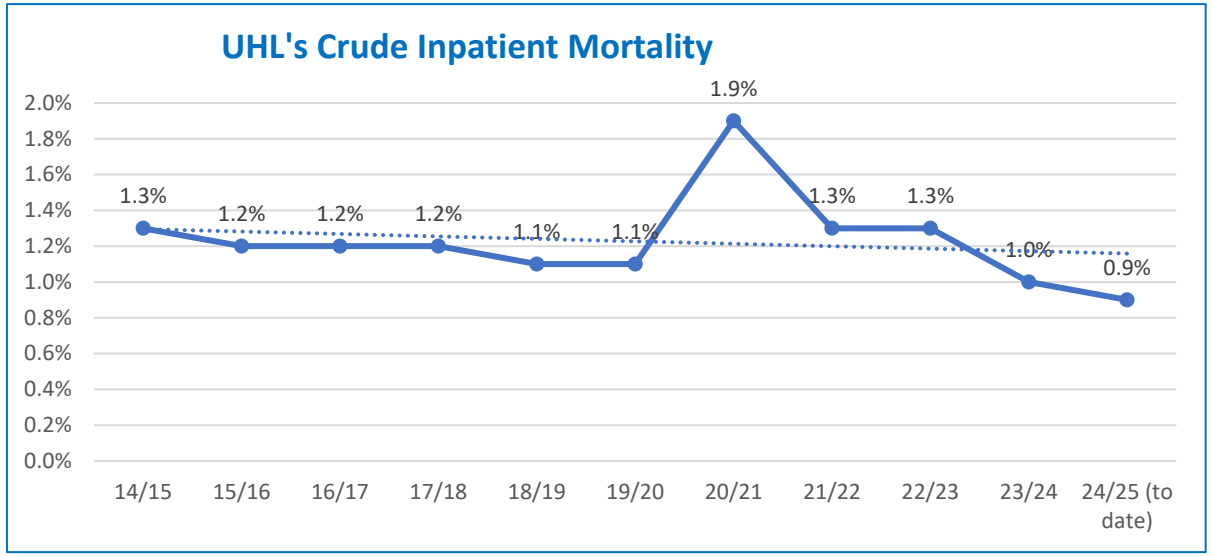
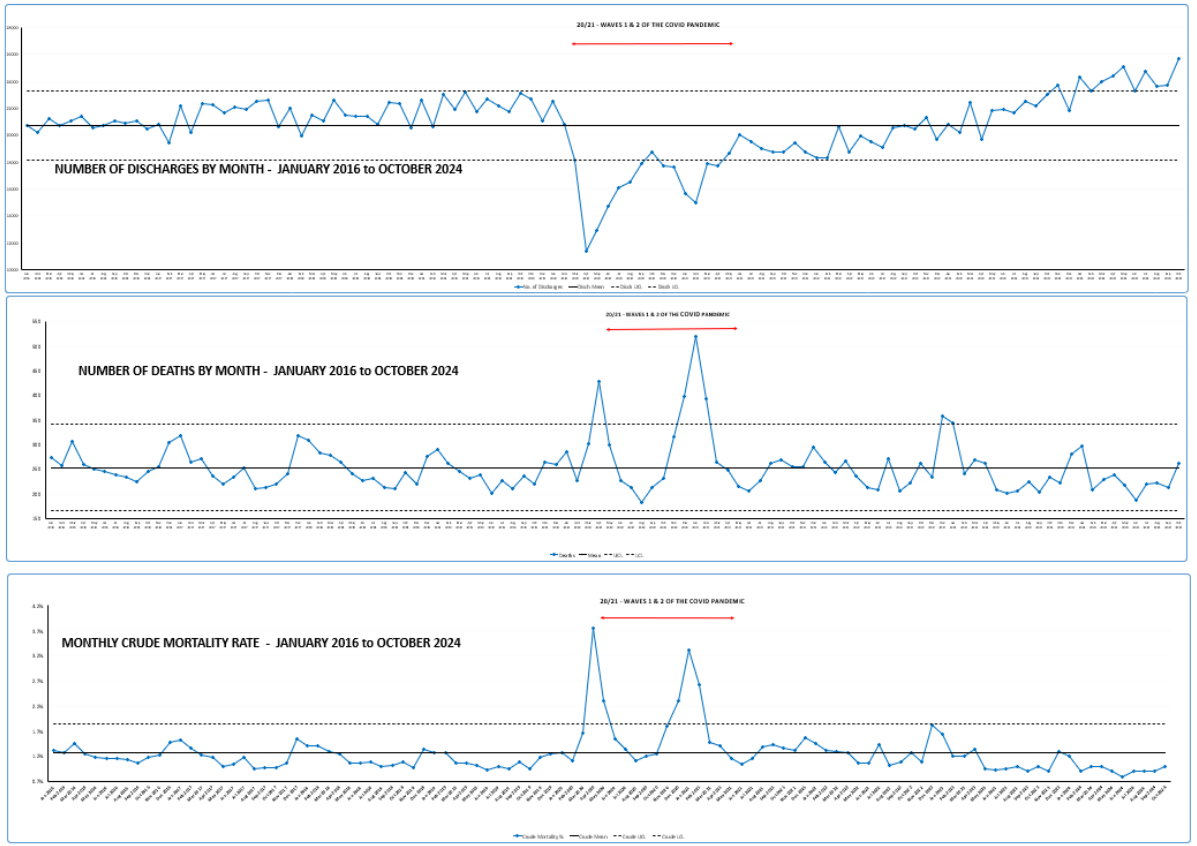


Chart 1 UHL's Crude Mortality Rate by Financial Year (14/15 – 24/25 to Oct 24)

Discharges During	ALL DISCHARGES (incl Day Case)	ALL IN-PATIENT DEATHS	INPATIENT CRUDE MORTALITY RATE
2024/25 (Apr-Oct 24)	170,544	1,516	0.9%

Table 1 UHL's Crude Mortality 24/25 to date)

Chart 2 SPC of UHL's Monthly Activity, Deaths, Crude Mortality Rate (Jan 16 – Oct 24)



UHL's crude mortality for the financial year 24/25 remains below 1% but there was an increase in the both the number and percentage of deaths for October.

The increase was related to emergency admissions and mainly in ESM and Respiratory – 30% of deaths in October were respiratory infection related

Summary Hospital-level Mortality Indicator (SHMI)
Trust-level summary

Return to contents Reset filters

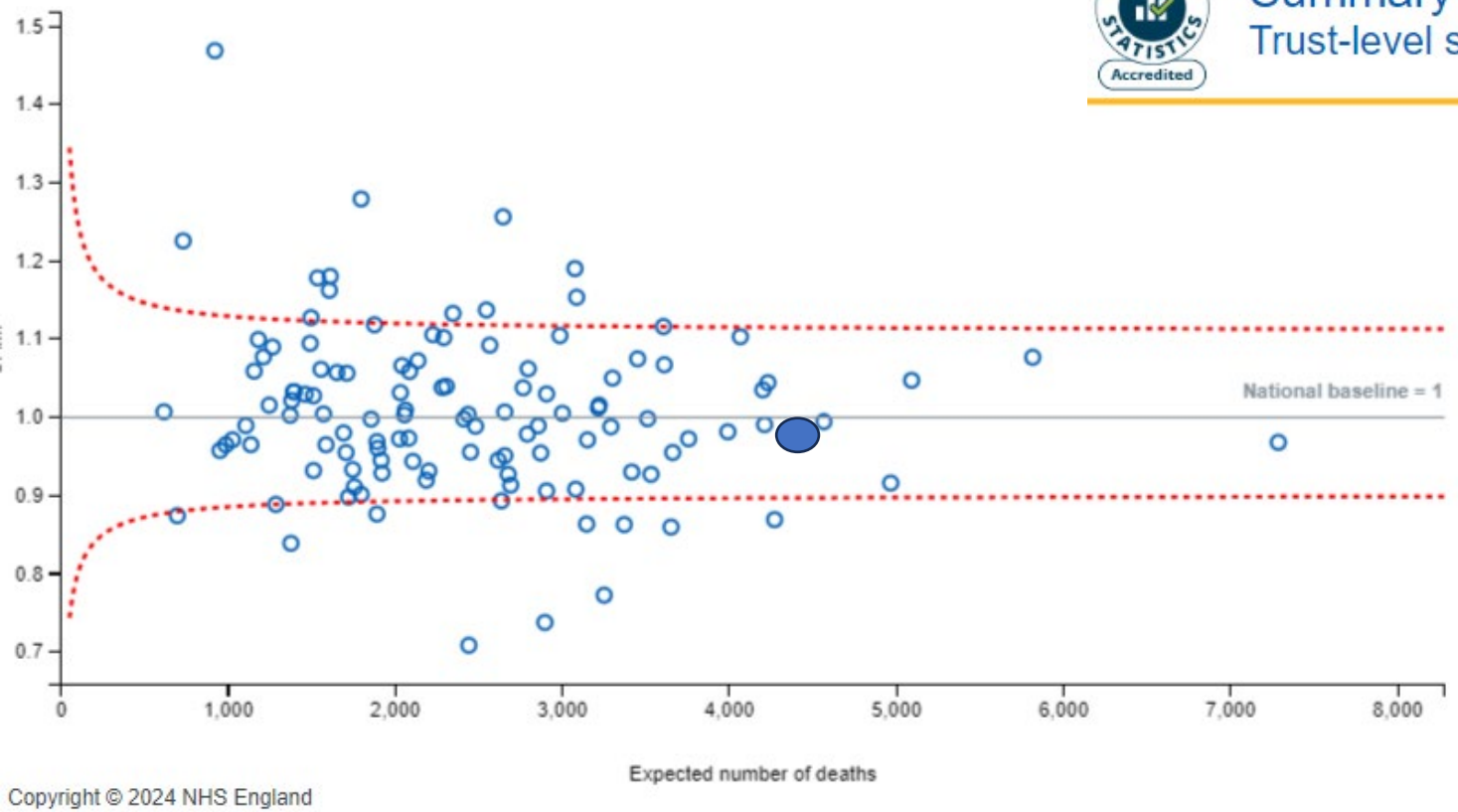


Chart 1 UHL's Latest SHMI (Jul 23-Jun24) compared with other Trusts

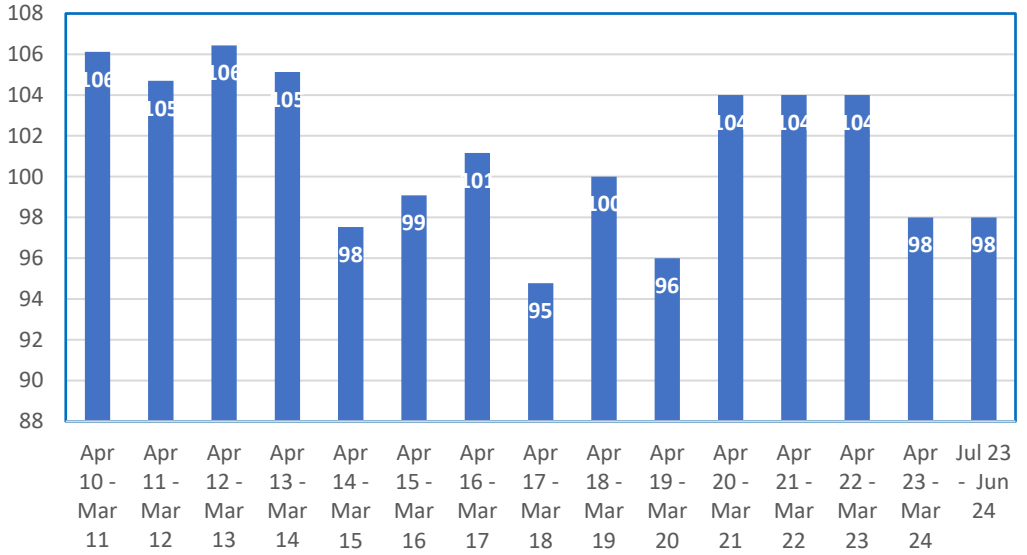


Chart 2 UHL's Rolling 12 mth SHMI by Financial Year & Latest 12 mth Period

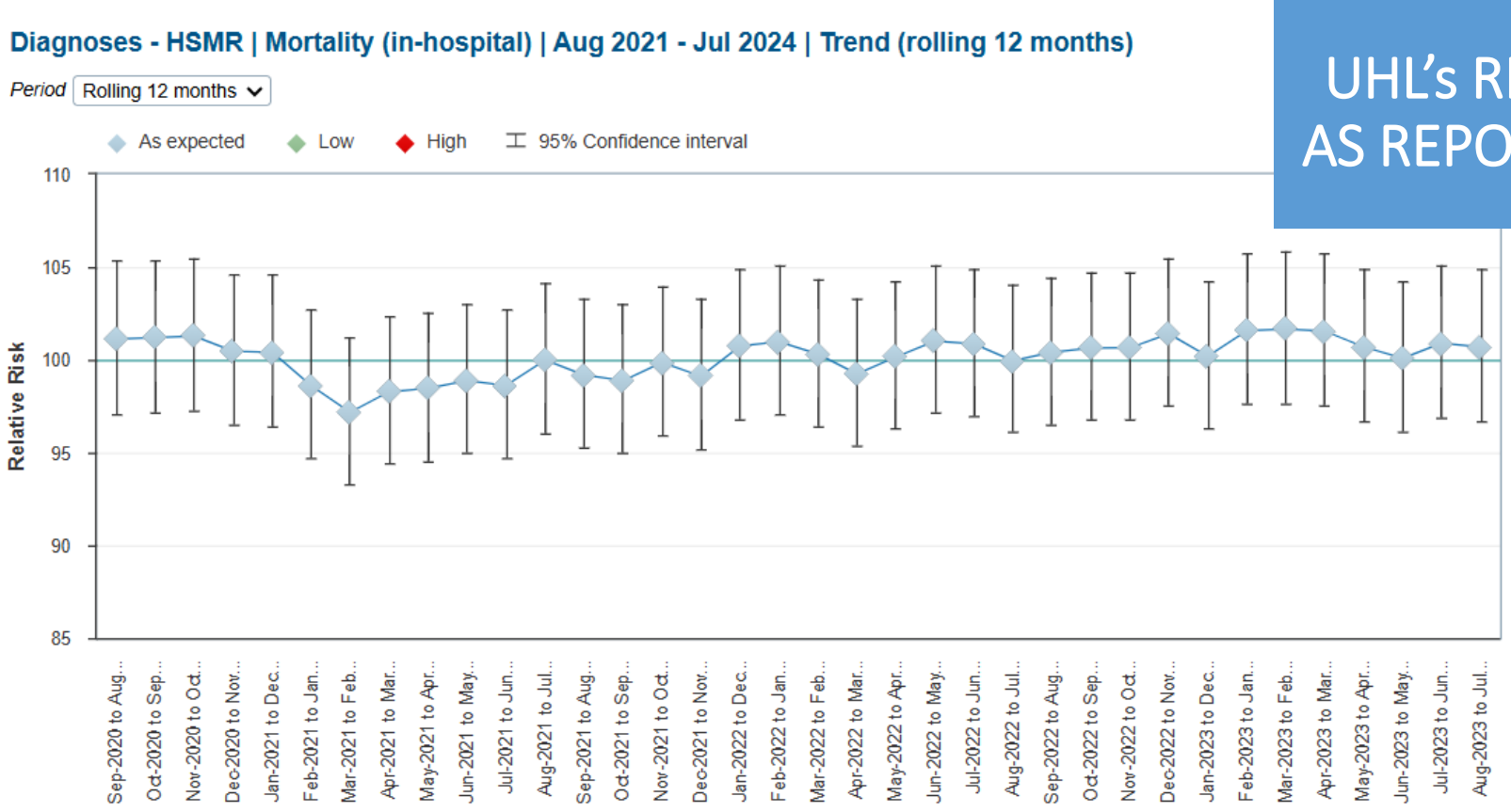
UHL's latest SHMI Value is 98 (for the 12 month period of July 2023 to June 2024)
There were 4099 deaths in that time period (66% inpatients and 34% within 30 days of discharge from UHL)

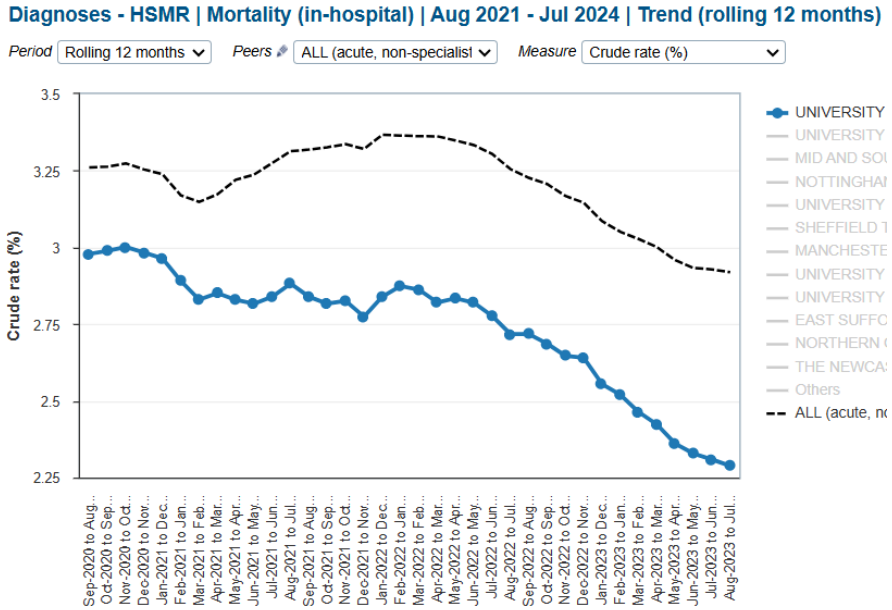
NHS Digital are not providing SHMI Values for all Sites within NHS Trusts but have provided for the LRI site and whilst above 100 (at 113) is 'within expected'.

Our SHMI has been below 100 for the last 5 reporting periods.

NHS Digital provide a SHMI value for 10 Diagnosis Groups. UHL's SHMI is above 100 for 5 of these (Septicaemia; Fluid & Electrolyte Disorders; Acute Myocardial Infarction; Acute Bronchitis and Gastrointestinal Haemorrhage); none are above expected. Further review being undertaken of the AMI data

UHL's RISK ADJUSTED MORTALITY (HSMR) AS REPORTED BY DR FOSTER INTELLIGENCE





Despite UHL's crude mortality consistently being lower than the average of All Non Specialist Acute Trusts, our HSMR remains above 100 (albeit within expected)

In the latest 12 months of data, the diagnosis group with the most deaths above expected and a 'higher than expected relative risk' are Acute Myocardial Infarction (OE = 12) – Relative Risk = 124 and Senility and Organic Mental Disorders (OE = 15) – Relative Risk = 144. We are still also alerting for the diagnosis group 'Other Perinatal Conditions' (relative risk = 333) and have 21 deaths more than expected Septicaemia.

Clinical Reviews have been previously carried out into all 3 of the above diagnosis groups as well as for others 'alerting' and whilst issues with care and learning points have been identified for individual patients (most of which had already been found as part of the Learning from Deaths process); there have not been any significant clinical concerns raised around pathways of care.

Work continues to look at improving the quality of clinical documentation to ensure that the case mix of our patients is appropriately captured in

IMPACT ON ROLL OUT OF MEDICAL EXAMINER PROCESS ACROSS ALL DEATHS IN LLR

There are an estimated 9,000 deaths in LLR per annum

Table 1: Activity (Non UHL includes deaths in Primary Care, LOROS and LPT

DEATHS GOING THROUGH THE MEDICAL EXAMINER PROCESS									
WHERE DIED	**22/23**	**23/24**		**24/25 Q1**	**Q2**	**Q3 (to 15/11/24)**	**YTD**	**Q4**	**24/25 Full Year**
Non UHL	~ 320	1,019		**322**	**575**	**637**	**1534**		
UHL	~3,450	3,031		**690**	**716**	416	**1822**		
ALL	**~3,770**	**4,050**		**1,012**	**1,291**	**1,053**	**3,356**		
ESTIMATED ACTIVITY FOR Q3 & Q4						**2,000**	**4,300**	**2,500**	**6,800**

(*taking into account usual increase in winter months)

Whilst a formal 'turn around performance target' has not yet been set, the expectation is that ME scrutiny will have been completed and MCCD sent to the Registrars same/next day following receipt of referral

In Q1 90% of non Coroner cases were completed within 1 day of referral

Since implementation <50% of non Coroner cases have been completed within 1 day of referral

Table 2: Number of Days involved in ME Scrutiny

	23/24	24/25 - Q1	SINCE FULL IMPLEMENTATION		
	Cause of Death Discussed Within 3 days of death		From Death to Referral from GP to ME Office	From Referral to MCCD Being Sent to Registrar	From Death to MCCD Being Sent to Registrar
NON UHL DEATHS (LOROS, LPT, PC)	**76%**	**76%**	**Average = 2 Days**	**Average = 3 Days**	**Average = 5 Days**
UHL DEATHS	**92%**	**91%**	**NA**	**Average = 2 Days**	**Average = 3 Days**

Learning Themes from Cases Discussed at MRC in Q2

- Handover of Anticoagulation Regime between teams and Anticoagulation bridging
- InReach Specialties' Documentation and Discharge Planning in the Emergency Department
- Co-ordination of care across Specialties
- Need to take into consideration patients' auditory or visual impairment when being asked to wait
- Consideration of differential diagnosis
- Documentation of safety netting advice given
- Importance of including patient's views on clinical status as part of assessment
- Post InPatient Falls Management
- Handover of outstanding tasks as part of handover
- Review of results prior to discharge in the Emergency Department

UHL PERINATAL MORTALITY

Quarterly update, October 2024

UHL perinatal mortality figures

The reports provided by MBRRACE-UK analyse data almost 2 years in retrospect. We endeavour to analyse the perinatal mortality data prospectively to identify any concerning themes/trends.

	Total SB	Corrected Stillbirths	SB rate	Total NND	Corrected Neonatal deaths	NND rate
2009	86			48		
2010	77			49		
2011	63			43		
2012	70	65		51		
2013	47	45	4.55	50	27	2.65
2014	56	51	4.59	46	23	2.37
2015	52	43	4.23	50	29	2.98
2016	55	47	4.25	52	25	2.39
2017*	43	37	4.05	39	21	2.18
2018	33	26	3.48	56	28	2.69
2019	34	29	3.46	46	24	2.45
2020	48	40	3.74	45	24	2.51
2021	56	50	4.52	36	28	2.76
2022	46	39	3.86	66	34	3.28
2023	45	32		65	37	
2024 Jan-September	44	36		47	24	

The stillbirth and neonatal deaths rates provided are the stabilised and adjusted rates provided by MBRRACE-UK, which allow for population size, deprivation, ethnicity and multiple births. They cannot be calculated locally.

* The traffic light system changed in 2017

The dataset for 2023 has now been verified and closed with MBRRACE-UK.

Colour shading represents comparison to our peer trusts as provided by MBRRACE-UK. They have changed the definitions of the traffic-light colour codes in comparison with previous years, in an attempt to be aspirational and encourage trusts to further improve their mortality rates. So yellow is now 5-15% better than the peer group average (previously 0-10% better), and orange is within 5% better or worse (previously 0-10% worse). Our peer group of trusts (>6000 births with neonatal surgical facility) have a higher stillbirth and neonatal death rate than the national average due to the complexity of cases.

July to September 2024

Deaths occurring in July to September 2024

Month	Stillbirths			Neonatal deaths (up to 28 days)		
	Total	**TOP**	**Corrected**	**Total**	**<24w/TOP/outborn**	**Corrected**
July	5	1	4	4	2	2
August	4	1	3	9	5	4
September	4	0	4	6	3	3
TOTAL	**13**	**2**	**11**	**19**	**10**	**9**

Neonatal deaths

The neonatal deaths included 5 babies <24 weeks gestation (18-23 weeks gestation). 2 of these babies died on the delivery suite (18w and 19w) and three on NNU (22w, 22w and 23w). One of the 22w babies was born after in utero transfer from within our neonatal network.

There were 3 neonatal deaths of outborn babies, all transferred from outside our network. One baby died of HIE (West Midlands), one from complications of prematurity (Midlands North) and one from a congenital cardiac anomaly (from South West England).

Two neonatal deaths were reported to the coroner, both livebirths from termination of pregnancy. One was at 16w gestation when a baby was unexpectedly born with signs of life after an uncomplicated TOP for chromosomal anomaly. The other baby was born alive at 19w after TOP by hysterotomy for maternal life-threatening haemorrhage. The coroner closed both cases quickly without need for post mortem examination.

None of the deaths were referred for investigation by MNSI.

Stillbirths

Of 13 stillbirths, 2 were due to TOP for congenital anomaly at 24w and 31w.

There were three term stillbirths.

The cause of death for all of the stillbirths is not yet established, however three appear to be associated with congenital anomaly.

PMRT reviews for deaths in quarters January to March 2024 and April to June 2024 are summarised in the downloaded PMRT reports.

Fetal Medicine Report

The report from the external review of fetal medicine services carried out in July 2024 has now been received. A small number of PMRT reports were reviewed by the team, alongside an overall review of our fetal medicine services. No significant issues were identified with respect to the mortality review process of the cases reviewed. There was a recognition of the unique set of fetal medicine and neonatal services provided at UHL (including level 3 neonatal service, neonatal surgery, paediatric cardiology and ECMO) with constructive suggestions how to move forwards to develop our fetal medicine service further.

A group has been formed to move forwards with proposals to change the medical and midwifery staffing, improve the estate provision, and develop the leadership of the service.

Maternity Incentive Scheme

Element 1 of the Maternity Incentive Scheme Year 6 relates to the reporting of perinatal deaths, and the use of PMRT for reviews. We are currently attaining all of the targets set by this element of MIS.

Further work:

- The analysis of the 2023 perinatal mortality data will be completed this month
- The 2023 national Perinatal Mortality Confidential enquiry will report in December 2024. This relates to perinatal mortality amongst recent migrants with limited English. The recommendations from this report will be reviewed and implemented once available.

PMRT - Perinatal Mortality Reviews Summary Report

This report has been generated following mortality reviews which were carried out using the national Perinatal Mortality Review Tool

University Hospitals of Leicester NHS Trust

Report of perinatal mortality reviews completed for deaths which occurred in the period:

1/1/2024 to 30/6/2024

Summary of perinatal deaths*

Total perinatal* deaths reported to the MBRRACE-UK perinatal mortality surveillance in this period: *52*

Summary of reviews**

Stillbirths and late fetal losses

Number of stillbirths and late fetal losses reported	Not supported for Review	Reviews in progress	Reviews completed and published ***	Grading of care: number of stillbirths and late fetal losses with issues with care likely to have made a difference to the outcome for the baby
39	14	8	17	0

Neonatal and post-neonatal deaths

Number of neonatal and post-neonatal deaths reported	Not supported for Review	Reviews in progress	Reviews completed and published ***	Grading of care: number of neonatal and post-neonatal deaths with issues with care likely to have made a difference to the outcome for the baby
33	4	13	16	0

*Late fetal losses, stillbirths and neonatal deaths (does not include post-neonatal deaths which are not eligible for MBRRACE-UK surveillance) – these are the total deaths reported and may not be all deaths which occurred in the reporting period if notification to MBRRACE-UK is delayed. Termination of pregnancy are excluded. All other perinatal deaths reported to MBRRACE-UK are included here regardless of whether a review has been started or is published.

** Post-neonatal deaths can also be reviewed using the PMRT

*** If a review has been started, but has not been completed and published then the information from that review does not appear in the rest of this summary report

Table 7: Top 10 issues** raised by the reviews identified as relevant to the deaths reviewed, by the number of deaths affected by each issue* and the actions planned

Issues raised which were identified as relevant to the deaths	Number of deaths	Actions planned
This mother did not give birth in a setting appropriate to her and/or her baby's clinical needs	2	No action entered
		No action entered
Although indicated this mother was not offered further postnatal investigations for herself and/or her baby	1	Reminder to all Obstetric Consultants that when conducting bereavement debriefs, to use the SB/ TOPFA pathway booklet to ensure appropriate PN investigations are completed. The form is designed as a prompt to ensure specific investigations have been conducted at the point of pregnancy loss such as; Thrombophilia screening. Feedback was also provided to the individual consultant.
Clear safeguarding/vulnerable plan not followed	1	Learning bulletin anonymising the case highlighting the concerns around awareness of safeguarding issues and professional communication. Telephone triage Tracker to show safeguarding alert advising the MAU midwives to review E3 BSOTS triage card to include safeguarding details to ensure all healthcare providers are alerted to safeguarding concerns.
Communication around antenatal appointments	1	Action already in place:- A mapping Exercise is being undertaken to establish what ongoing education is being provided regarding the use of interpreters. This falls within Workstream 1 of MNIP.
Complications of care in an extremely preterm baby	1	No action entered
Hand-held Maternity Notes to be reviewed to establish if conversations were held and Interpreting services used during discussions around altered fetal movements.	1	Review maternity notes and establish if future action is needed.
Induction or elective delivery was indicated but the timing of the induction/elective delivery was not appropriate for 'other' reasons	1	For individual feedback to the relevant clinician
The confirmed/suspected delay in this mother's labour was not managed appropriately	1	For individual feedback to the relevant clinician
The ongoing infection management and/or prevention on the neonatal unit was not appropriate	1	To discuss at upcoming guideline discussion about the earlier use of meropenem in babies with significant signs of sepsis and/or unwell babies with parental history of time in India or similar countries
There was no documentation within the handheld notes to confirm if altered fetal movements had been discussed.	1	The issue to be highlighted to community midwifery matron for dissemination

*Note - depending upon the circumstances in individual cases the same issue can be raised as relevant to the deaths reviewed and also not relevant to the deaths reviewed.

** There are further issues which can be downloaded directly as a spreadsheet using the Extract Issues/Factors button

Table 8: Top 10 issues** raised by the reviews which are of concern but not directly relevant to the deaths reviewed, by the number of deaths in which this issue was identified* and the actions planned

Issues raised which were identified as not relevant to the deaths	Number of deaths	Actions planned
It is not possible to tell from the notes if the parents were offered the opportunity to take their baby home	9	No action entered
		Ensure embedding of new DS NNU pathway
		No action entered
		No action entered
		Already completed. New pathway introduced since Mya's death
		No action entered
		No action entered
		No action entered
		No action entered
The baby had to be transferred elsewhere for the post-mortem	6	No action entered
		No action entered
		No action entered
		No action entered
		No action entered
		No action entered
It is not possible to tell from the notes whether during the early bereavement period use of a cold cot was offered/available	4	Reminder to midwives that cold cot should be used even when the parents are not wanting to see or hold the baby. Baby should remain in the cold cot until goes to the mortuary. To be included in bereavement training day.
		No action entered
		No action entered
		No action entered
This mother booked late. Are there any organisations to consider in relation to her booking late?	4	No action entered
		No action entered
		No action entered
		No action entered
This mother booked late. Did this affect her care?	4	No action entered
		No action entered
		No action entered
		No action entered
NICE guidance recommends carbon monoxide testing for all mothers at booking; this mother was not screened	3	Community Midwives are to be reminded that Carbon monoxide should be checked at every appointment. A workstream is already in place to support this action.
		No action entered

		No action entered
It is not possible to tell from the notes if the parents were offered the opportunity to exercise their particular religious/spiritual/cultural wishes	2	No action entered
		Already completed. New pathway introduced since Mya's death
The baby was cold on arrival in the neonatal unit	2	As part of periprem project education around thermoregulation is included in the QI project.
		Training and education to neonatal clinicians regarding maintaining neonatal temperature on transfer
The mother had poor/no English and it is not possible to assess from the notes what arrangements were made for interpretation during the first 24 hours that her baby was on the neonatal unit	2	Staff to be reminded to note what interpreter is needed and when one is used.
		The use of interpreters for all clinical encounters is included in learning points and in the overview summary for PMR
The mother had poor/no English and it is not possible to assess from the notes what arrangements were made for interpretation during the time that her baby was on the neonatal unit	2	Staff to be reminded to note what interpreter is needed and when one is used.
		The use of interpreters for all clinical encounters is included in learning points and overview summary for PMR

*Note - depending upon the circumstances in individual cases the same issue can be raised as relevant to the deaths reviewed and also not relevant to the deaths reviewed.

** There are further issues which can be downloaded directly as a spreadsheet using the Extract Issues/Factors button

Table 9: Top 5 contributory factors related to issues identified as relevant to the deaths reviewed, by the frequency of the contributory factor and the issues to which the contributory factors related

Issue Factor	Number of deaths	Issues raised for which these were the contributory factors
Task Factors - Guidelines, Policies and Procedures	1	This mother had preterm labour or had preterm prelabour rupture of membranes during her pregnancy and there was a delay in the diagnosis
		This mother had preterm labour or had preterm prelabour rupture of membranes during her pregnancy which was not managed according to national or local guidelines
		This mother was in preterm labour/threatened preterm labour but was not offered antibiotics when they were indicated
Task Factors - Procedural or Task Design	1	Induction or elective delivery was indicated but the timing of the induction/elective delivery was not appropriate for 'other' reasons
		The confirmed/suspected delay in this mother's labour was not managed appropriately
Patient Factors - Clinical Conditions	1	Complications of care in an extremely preterm baby
Patient Factors - Clinical Conditions - Seriousness of condition	1	The ongoing infection management and/or prevention on the neonatal unit was not appropriate
Patient Factors - Clinical Conditions - Complexity of condition	1	This mother did not give birth in a setting appropriate to her and/or her baby's clinical needs

University Hospitals of Leicester NHS
NHS Trust

Meeting title:	Quality Committee
Date of the meeting:	28th November 2024
Title:	HSMR plus impact analysis UHL
Report presented by:	Gill Price-Kaged senior analysist, Telstra health.
Report written by:	Gang Xu, Deputy Medical Director

Action – this paper is for:	Decision/Approval		Assurance	x	Update	
Where this report has been discussed previously	MORTALITY REVIEW COMMITTEE					

To your knowledge, does the report provide assurance or mitigate any significant risks? If yes, please detail which
N/A

Impact assessment
• Changes in the Hospital Standardised Mortality Ratio (HSMR) methodology changes Telstra (Dr Foster) mortality rating from UHL. This change does not reflect any changes in practice, but demonstrates the importance of accurate data coding.

Acronyms used:
SHMI – Summary Hospital Mortality Index (all inpatient deaths and deaths within 30 days of discharge to the community setting); HSMR – Hospital Standardised Mortality Ration (56 diagnosis groups in hospital deaths);

Purpose of the Report

Update to Quality committee

- Change in HSMR methodology to capture additional co-morbidity data and removal of palliative care adjustment.
- UHL and other organisations have seen changes in Banding score.
- Other external data sets offer ongoing assurance.
- Strong commitment of mortality review and learning from the trust's Mortality and Learning from Deaths Report

Summary

The committee noted the change in HSMR methodology to HSMR+(plus), and its impact on UHLs mortality banding from Within expected to Above expected. Quality Committee remain fully assured regarding morality outcome data at UHL.

Changes in methodology from HSMR to HSMR+:

Telstra (DrFoster) is introducing a change to the HSMR calculation to include a boarder range of co-morbidities, remove of palliative care coding, changes to deprivation scoring, and COVID updates as an result of national and internal feedback on their established HSMR.

Due to UHL's lower than expected depth of coding, and through retrospective data analysis the new methodology (HSMR plus) is projected to change UHLs mortality banding from 'Within' expected to 'Above' expected due to an increase of 8.6 points in relative risk (Figure 1). Across the Telstra users, 31% saw a change in their banding, 19% increased (22 trusts), and 13% decreased (15 trusts).

HSMR vs HSMR+ (The original HSMR vs HSMR+)	Relative Risk	Banding
HSMR	99.01 (95.14 - 103.00)	Within
HSMR+	107.61 (103.36 - 111.98)	Above

Figure 1: Expected change to UHLs mortality banding as reported by Telstra, due to be implemented end 2024.

The biggest drivers to the increase in rankings is reduced recorded comorbidity data for patients at UHL, as well as removal of palliative care coding.

Key	Model Iterations	Relative Risk Difference
1	HSMR vs HSMR+	8.60
2	HSMR vs HSMR without palliative	1.90
3	HSMR without palliative vs. HSMR+	7.18
4	Cohort Update	-0.48
5	COVID subgroup	-0.05
6	Deprivation	0.42
7	Comorbidity	5.53
8	Frailty	0.34
9	Palliative care	2.80
10	Modelling	0.01

Figure 2: Data from Telstra on most influential factors effecting the HSMR versus HSMR+ mortality risk score.

When applied retrospectively, UHL's HSMR+ banding remains stable over the last 3 years with a gradual decline over the last 2 years (Figure 3).

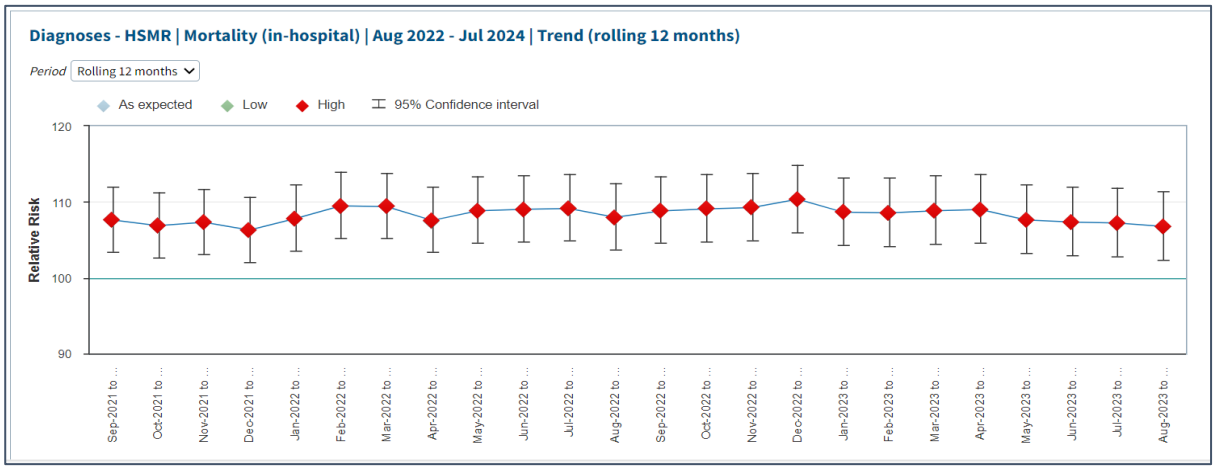


Figure 3: UHLs mortality rating with HSMR+ methodology applied retrospectively over the last 2 years.

Depth of coding:

The trust continues to have a lower depth of coding compared to peers, falling from 114 in 2019 (100 national) to 85 in 2024/25. The trust shows a higher percentage of activity with 0 comorbidity score than both National and regional peers. There is an ongoing work programme in the trust to improve coding accuracy.

Crude and SHMI:

Overall crude mortality data remains stable and falling, a consistent trend across the NHS (Figure 4). The trusts SHMI data provided by NHS digital, shows a stable trend of 98.33 for June 23-May 24. This figure is within expected and consistently below 100 (national index) for the last 5 SHMI reports.

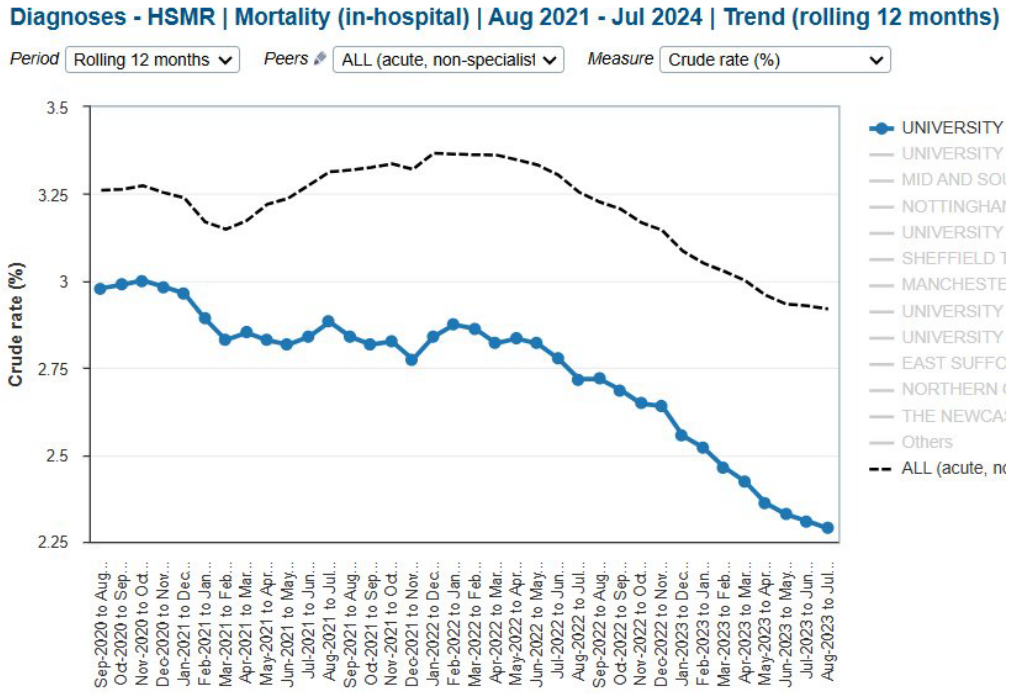


Figure 4: UHL 12-monthly crude mortality rate from 2020 to 2024 compared to peer organisations.

Summary:

Due to change in methodology from HSMR to HSMR+ to be implemented by Telstar end 2024, UHL's banding for mortality is expected to increase from 'Within expected' to 'Above expected'. Quality Committee members remain fully assured by UHL's mortality data reflecting on the change in banding relates to a change data methodology analysis as well as assurance received by triangulation with other national data sets (SHMI), and ongoing focus regarding learning from death through as evidence by the Mortality and Learning from Deaths Report.