

Board of Directors (in Public)

Item 2.1

Subject: Organisational Learning from Deaths – Annual Report
 Date of Meeting: 10th June 2025
 Prepared by: Liam Mullen, Chair – Mortality Review Group
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 Presented by: Justin Ratnasingham – Divisional Medical Director
 Purpose of Report: For Noting

BAF Reference	Impact on BAF
BAF 1	Assurance on mortality reviews and learning from deaths, and possible avoidable patient harm.

Level of Assurance (please tick) To be used to provide the Board / Committee with a guide on the extent of assurance and evidence of assurance provided within the report.		<input checked="" type="checkbox"/>
Level of Assurance	Description	
High	There is a strong system of internal control which has been effectively designed to meet the system objectives, and that controls are consistently applied in all areas reviewed.	<input type="checkbox"/>
Substantial	There is a good system of internal control designed to meet the system objectives, and that controls are generally being applied consistently.	<input checked="" type="checkbox"/>
Moderate	There is an adequate system of internal control, however, in some areas weakness in design and/or inconsistent application of controls puts the achievement and some aspects of the system objectives at risk.	<input type="checkbox"/>
Limited	There is a compromised system of internal control as weaknesses in the design and / or inconsistent application of controls puts the achievement of the system objectives at risk.	<input type="checkbox"/>
No	There is an inadequate system of internal control as weaknesses in control, and/or consistent non-compliance with controls could/has resulted in failure to achieve the system objectives.	<input type="checkbox"/>

1. Executive Summary

Guidance on learning from deaths was published by the National Quality Board in March 2017 and was presented to the Board of Directors in May 2017. Quarterly reports have been presented to the Board of Directors since.

Deaths are categorised as to the likelihood of being avoidable or not (on balance of probability >/< 50:50) and the data collected centrally each quarter.

The mortality dashboard year to date has been presented at the Board of Directors in Public and this report includes organisational learning from deaths.

This report also includes any available updates from previous reports.

2. Background

The learning from deaths guidance has a strong emphasis on organisational learning from all deaths rather than from just preventable or avoidable deaths. The definitions of preventable/ avoidable deaths have been revised. The threshold of defining preventable/ avoidable death is now on the basis of more likely than not encompassing the categories of definitely avoidable, strong evidence of avoidability and probably avoidable (greater than 50:50). Deaths are classified using the RCP (Royal College of Physicians) methodology unless they occur in individuals with an identified learning disability. In those individuals LeDeR (Learning Disability Mortality Review) methodology is used, and a full review carried out without prior screening.

When cases have been reviewed by the MRG (Mortality Review Group) the action logs are sent to the divisions to review in divisional governance. The action log will include when the case is also to be reviewed during the relevant audit day. Joint Cardiology, Surgery and Anaesthesia audit days are held every two months where all relevant reviews are presented, and learning discussed and shared. Respiratory Medicine have their own audit days where similar discussions occur.

The Divisions also track action plans arising from learning points. This data will be triangulated with Dr Foster (Telstra Health) data, InPhase, complaints, coroner's cases and audits. This will facilitate system identification of common themes and cross reference to RCAs, divisional minutes and MRG outcomes. Every month at Operational Board the Divisions present a session on organisational learning (not necessarily related to deaths).

All deaths have an initial review by the Deputy Director of Nursing to assess any issues raised by families and carers. The responsible Consultant or an ITU Consultant will invariably have spoken to families at the time of death. Further discussions with families unable to meet immediately after the time of death are offered the opportunity at a time convenient to the family. Any concerns raised by the families after a period of reflection are responded to and where appropriate investigated. If the death is considered avoidable or classed as an incident full duty of candour is exercised and any resultant RCA discussed with families.

Engagement with families has been enhanced by the establishment of the medical examiners who oversee the death certification process and the medical examiner officer who discusses concerns with families. The Medical Examiners and Medical Examiner Officer discuss issues raised by families at the time of death certification.

3. Annual deaths 2024-25

There were a total of 199 deaths in the year 2024-25. All 199 deaths have completed the review process. There were six avoidable deaths (three RCP 3 >50:50 avoidable, two RCP 2: strong evidence of avoidability and one RCP 1: definitely avoidable) in the year (3.1% of total deaths).

Of those less than 50:50 in the year 2024-25, 11 deaths (5.5%) were classed probably avoidable but not very likely (RCP4); 15 deaths (7.5%) were classed as slight evidence of avoidability (RCP5); 167 deaths (83.9%) were classed as definitely not avoidable (RCP6).

By comparison there was only one avoidable death in 2023/24 (RCP 3) but a comparable 6 avoidable deaths in 2022/23; three with strong evidence of avoidability (RCP 2) and three probably avoidable (RCP 3). This constituted 3.3% of all deaths that year.

Table below shows LHCH total deaths for last ten years.

Financial Year Full	Total Annual Deaths
2015/16	174
2016/17	184
2017/18	215
2018/19	181
2019/20	189
2020/21	191
2021/22	223
2022/23	182
2023/24	214
2024/25	199

4. Organisational Learning from Deaths (2024-25)

A report on the deaths at LHCH in 2024-25, including a summary of the MRG review process, the main causes of deaths, and a summary of organizational learning is presented in appendix 1.

5. Conclusions

The Trust complies with national guidance and populates the mortality dashboard. There is a rigorous review process for all deaths within the Trust. Learning from these deaths is shared widely through Divisional Boards, clinical audit meetings and also by uploading relevant presentations to a mortality SharePoint page which can be accessed at any time.

6. Recommendations

The Board of Directors is requested to note the report.

Appendix 1 – Organisational Learning from Death – 2024-25

LHCH Mortalities 2024/25 – All Deaths					
	Screened no Review	Screened Review Complete	Screening	Under Review	Total Deaths
Q1	43	9			52
Q2	35	13			48
Q3	33	12			45
Q4	44	10			54
Total	155	44			199

LHCH Mortalities 2024/25 – All Deaths							
	Definitely not avoidable (RCP 6)	Slight evidence for avoidability (RCP 5)	Possibly avoidable, but not very likely, less than 50-50 (RCP 4)	Probably avoidable, more than 50-50 (RCP 3)	Strong evidence for avoidability (RCP 2)	Definitely avoidable (RCP 1)	Total Deaths
Q1	46	3	2	1			52
Q2	40	5	3				48
Q3	33	6	2	2	1	1	45
Q4	48	1	4		1		54
Total	167	15	11	3	2	1	199

Main Cause of Death – Cardiac /Aortic Surgery	n
Heart failure	6
High risk Procedure	6
Pre-procedural moribund state	4
Other	4
CVA	4
Technical procedural issue inc Myocardial protection	4
Myocardial Infarction	3
Respiratory failure	3
Mesenteric ischaemia	5
Pre-existing Pathology	3
Post-procedural bleeding / Tamponade	2
Hypoxic brain injury	2
Sepsis	2
Aortic Dissection	1
Respiratory failure	1
Multi-Organ Failure	1
Unheralded arrhythmia	1
PM AWAITED	1
Total	53

Main Cause of Death - Thoracic Surgery	n
Respiratory failure	10
Sepsis	2
Other	2
Pre-existing Pathology	2
High risk Procedure	1
Aortic occlusion	1
CVA	1
Pre-procedural moribund state	1
Total	20

Main Cause of Death - Medical Division	n
Heart failure – RV / LV	29
Myocardial Infarction	26
Pre-procedural moribund state	15
Other	13
Hypoxic brain injury	13
Pre-existing Pathology	9
Unheralded arrhythmia	8
Sepsis	3
General deterioration in the v elderly	2
Post-procedural bleeding / Tamponade	2
Mesenteric ischaemia	1
High risk Procedure	1
Non-compliance with medication leading to fatal stent thrombosis	1
Aortic Dissection	1
Aortic Stenosis	1
Technical procedural issue inc Myocardial protection	1
Total	126

Month	% screened ≤7 Death	% Reviewed ≤30 Allocation for Review	% Reviewed OR Screened no time frame	Deaths
Apr-24	67%	80%	100%	15
May-24	65%	94%	100%	17
Jun-24	70%	85%	100%	20
Jul-24	59%	76%	100%	17
Aug-24	82%	88%	100%	17
Sep-24	71%	86%	100%	14
Oct-24	31%	69%	100%	13
Nov-24	78%	83%	100%	18
Dec-24	71%	71%	100%	14
Jan-25	65%	82%	100%	17
Feb-25	56%	88%	100%	16
Mar-25	57%	81%	100%	21
YTD	65%	82%	100%	199

Summary of mortality data

- There have been 199 deaths in the trust for the year 2024-2025, which is a decrease on last year's 214 deaths.
- There have been 3 deaths deemed as being probably avoidable > 50:50 (RCP 3), 2 deaths with strong evidence of avoidability (RCP 2) and 1 death deemed as definitely avoidable (RCP 1). Last year there was only 1 death deemed as having any evidence of avoidability (RCP 3).
- The underlying causes of death vary between specialities. Within cardiac surgery high risk procedure and heart failure are the most common, a persistent theme over time. As expected within thoracic surgery, respiratory failure is the most common cause, usually in patients who have undergone lung resection surgery. Within medicine heart failure and myocardial infarction are the most common. Again, this is to be expected and is reflective of the nature of services at LHCH. The volume of patients that are admitted through the Primary PCI pathway and die following a myocardial infarction clearly contributes to a large proportion of the expected mortalities.
- Compliance with target time for completion of screens and full reviews remains challenging at 65% and 82% respectively. To some extent this is not surprising given the increasingly busy and varied workload amongst the consultant body, with relatively less admin time in job plans. Nonetheless efforts are under way to improve these figures. Following a recent change in stewardship of the MRG, there is a plan in place for a comprehensive audit of turnaround times and escalation to clinical leads/divisional directors to try to address as best possible.
- 44 deaths from 2024/2025 have been discussed at the Mortality Review Group (MRG).

Changes to the MRG and learning from deaths process.

- The MRG sits monthly and has had a new Chair since February 2025.
- Attendance at the MRG had already been expanded to include different specialties and non-medical representatives over the last couple of years.
- With the new chairmanship, there has been a further refreshing of MRG membership. This has been with the aim of ensuring sufficient and balanced representation across the necessary service lines.
- For educational purposes, a cardiology resident doctor is being invited to attend the MRG meetings each month using a rolling rota.
- Key learning is identified at the MRG meeting and is shared for discussion at audit day. Any deaths with cross speciality learning (cardiology/surgery/anaesthesia) are discussed at the combined audit days with cardiology, to ensure that the learning is disseminated across all the teams. The MRG chair also ensures learning action points are fed back to the relevant clinical leads/management.
- A bespoke mortality module was developed on the new InPhase system in the last couple of years. This is a significant improvement compared to the old PDF based system. It allows all deaths to be tracked by stage and for actions to be generated which can then be allocated to a specific person to take forwards. This therefore closes the loop on key outcomes generated by the MRG. This system has been subject to minor amendments over the last 12-month period, aimed at improving the process further.
- At the end of this financial year, there has been an update of the cause of death list on the mortality forms by the new chair. This has been done, also in conjunction with the surgeons, to provide a more useful classification of deaths for contemporary practice. This will allow better audit and learning from deaths going forward.
- There has also been a significant change to the integration of nursing reviews into the MRG process. Previously nursing reviews were separate and in PDF form but since the change in chairmanship, we have integrated a nursing review document into the MRG online record. This has led to better linking with the medical review documents. Nursing reviewers have been invited to present their findings alongside the usual medical presentation at MRG meetings. The new catheter lab matron has agreed to perform routine nursing screen/review on any death that occurs in the catheter lab, alongside the usual medical screen. Other deaths requiring nursing review are identified at the point of medical screening.
- The chair has recently met with the Trust's patient safety lead to discuss the complementary but distinctly separate roles that the MRG process and PSIRF should take. The differences in PSIRF compared to previous processes such as root cause analyses (RCA) require a slightly different approach to this and will need to be

reflected in the next MRG policy update. The key point is that patient safety investigations should be triggered via incident reports at the time of events, rather than reliance on MRG identification later. Nonetheless it was agreed that the MRG acts as a useful back stop to identify any cases where patient safety investigations might not have been immediately triggered otherwise. A new automated process has been implemented within the inPhase mortality forms to flag whether patient safety incidents have been commenced, visible at the time of mortality screening. The MRG chair would communicate to the patient safety lead/team in the event that it is felt PSIRF is required but has not been initiated already.

Key themes, learning and actions taken.

Definitely avoidable death

- There was one avoidable death in this time period.
- This was a case of a patient transferred to LHCH on the ACS pathway, following a myocardial infarction.
- The patient died in the catheter lab due to a cardiac arrest that occurred as a complication of attempted percutaneous coronary intervention to the circumflex vessel
- This case has been extensively discussed within the cardiology directorate, at the weekly meeting and underwent a PSII.
- It underwent full MRG review and presentation at an audit day for learning.
- It was highlighted during this process that the cardiology weekly meeting (for presentation of complications during procedures) was a very robust and effective method of learning within the department.
- The ultimate conclusion from the reviews of this case was that the fundamental issue was an incorrect clinical decision on which coronary artery was the culprit for the presentation and therefore target for intervention. This led to the unfortunate, but otherwise not predictable, complication and cardiac arrest.
- There has been an effective duty of candour process undertaken with the family, and constructive learning both for the individual clinician and wider team from this event.

Failure to escalate

- When cases are reviewed in detail, it is sometimes apparent that the patient was deteriorating at a much earlier stage. However, at times, this deterioration is not escalated for consultant advice or review, or it is escalated but inappropriate advice and management is given.
- This has been discussed extensively at audit day with trainees present to highlight the issue of early escalation.

- Emphasis placed on the importance of appropriate escalation to Consultants, with creation of formal escalation policy within critical care.

TAVI procedural deaths

- The MRG had noted a series of deaths occurring as an immediate complication, or very soon after, TAVI procedures
- The overriding common theme was of annular complications e.g. annular rupture after device implantation
- There was not felt to be any real avoidability on an individual case basis but was discussed with TAVI team for learning.
- It was clear that the increase in deaths of this nature seen was on account of the recent increase in TAVI procedural numbers at LHCH.
- The complication rate is within the expected rate based on literature (<1%).
- There is a robust system in place for review of these cases within the TAVI team (regular M&M meetings)
- An overview of the cases and learning was presented at a recent cardiology audit meeting.
- The main learning points are surrounding recognition of cases at high risk of annular complication, particularly with regards the distribution of calcium on the valve. This will aid better decision making in the TAVI MDT process.
- part of the comfort check.

High risk procedures/MDT

- As previously described patients are undergoing increasingly complex procedures and are in worse clinical condition by the time they have these procedures.
- The importance of an MDT process in these cases has been highlighted as learning, and practice appears to have improved in this regard. There is now also a high-risk anaesthetic clinic that allows for an anaesthetic opinion and optimisation prior to their surgery.
- Work is also being done on developing a pre-habilitation service to try and better prepare patients for major surgery. This is in conjunction with the new urgent at home surgical pathway and other aspects such as the pre-surgery diabetic optimisation referral system.

Intra-aortic balloon pump related complications

- Some instances of issues with intra-aortic balloon pump placement and management in theatres/critical care areas were highlighted in MRG processes.

- Whilst the IABP issues may not have been directly causative of death in each case, the potential for learning and improvement was identified.
- Teaching has been undertaken as part of surgical audit days, and there is a plan to review the process of IABP implantation (outside of areas where fluoroscopy is directly available such as catheter lab) to try to standardise and improve practice further.

Mechanical complications of myocardial infarction

- There has been a probable increase in the number of patients presenting with, or subsequently suffering from, mechanical complications of MI at LHCH in the last few years.
- This includes ventricular septal defects, ischaemic mitral regurgitation and free wall ruptures.
- The reasons for this are potentially multifactorial but could in part relate to the delays in MI treatment that have been observed nationwide (e.g. metrics such as call to balloon time in PPCI for MI). Factors involved may be increasing A&E waiting times, consequent reluctance of patients to attend hospitals, and a down categorisation of suspected MI in ambulance protocols.
- As a result, patients are now more likely to present late with MI and these complications are therefore potentially going to become more frequent.
- As the mortality of patients presenting with these complications is so high, regardless of interventions, there has not been found to be any great avoidability in particular cases reviewed within the MRG.
- Nonetheless, learning has been identified with regards to the importance of timely consideration and identification of mechanical complications, including the use of transthoracic echo.
- Multiple teaching sessions have been delivered on this subject, both at audit days and discussion with cardiology directorate weekly meetings.
- There has also been significant discussion on the management of VSDs within the MDT and surgical audit meeting.

Catheter Lab Checklist

- A complex case of a death due to bleeding complications of procedural vascular access prompted an extensive MRG review and PSII process.
- One of the areas for improvement noted from this was with regards to the catheter lab checklist and pre procedural safety checks e.g. INR level.
- As a result of this, significant changes have been made to the catheter lab pre procedural checklist and team briefing, to bring it up to date with WHO guidelines.

- This is with the aim of minimising the potential risks to patients from procedures and improving communication amongst all team members.

Right Ventricle Protection in MV surgery

- The MRG identified a theme with regards to RV protection intra operatively in mitral valve surgery and a lack of standardised practice in this regard.
- As a result, learning was disseminated within the anaesthetic/surgical team.
- This has led to some standardisation of practice with regards to cardioplegia techniques, as an example.

Cardiogenic Shock Pathway

- A recent death of a young patient, presenting with cardiogenic shock to LHCH has prompted extensive review and learning of pathways for these patients.
- Whilst it was felt care at LHCH was excellent, with no avoidability, there were concerns regarding the lack of access to certain mechanical circulatory support options and the challenges of communication/sub optimal referral pathways to the regional transplant centre (Wythenshawe Hospital)
- This has led to discussions with the transplant centre and commitments to try to improve regional pathways and establish better links
- One of the cardiology consultants is leading on a new shock pathway currently undergoing peer review process.
- This includes a plan to improve the links with Wythenshawe for timely transfer of appropriate patients/clinical advice.
- In addition, cardiology and anaesthetic teams are reviewing the potential/practicalities of seeking provision of mechanical support options at LHCH such as Impella devices and ECMO. Clearly these have significant financial and other practicalities to consider and are only in the exploratory phase currently.