

Board of Directors (in Public)

Item 5.5

Subject: Organisational Learning from Deaths – Q4 update and Annual Report
Date of Meeting: 28th May 2024
Prepared by: Neil Coulson, Chair – Mortality Review Group
 Manoj Kuduvalli – Medical Director
Presented by: Manoj Kuduvalli – Medical Director
Purpose of Report: For Noting

BAF Reference	Impact on BAF
BAF 1	The report provides assurance regarding learning from deaths, and possible avoidable patient harm.

Level of assurance (<i>please tick one</i>) <i>To be used when the content of the report provides evidence of assurance</i>					
<input checked="" type="checkbox"/>	Acceptable assurance Controls are suitably designed, with evidence of them being consistently applied and effective in practice	<input type="checkbox"/>	Partial assurance Controls are still maturing – evidence shows that further action is required to improve their effectiveness	<input type="checkbox"/>	Low assurance Evidence indicates poor effectiveness of controls

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. Dashboard Q4 2023/24

There have been 64 deaths in the trust between January and March 2024. For comparison the total number of deaths in the trust for Q4 2022/23 was 50. Fifty-five of these deaths have been through the complete mortality review process. There have been no deaths in patients with an identified learning disability.

In interpreting the accompanying spreadsheet and Appendix 1, it should be borne in mind that there may be an adjustment of the previous quarter's assessment of avoidability. This is because some of the returned full reviews will subsequently have been recalibrated by the mortality review group at their monthly meeting. Some cases rated by reviewer as less than 50:50 may have been deemed avoidable by the MRG and vice-versa.

In Q4 23/24 no death has been classified as an avoidable death.

Of those less than 50:50 in Q4 six deaths (9.2%) were classed probably avoidable but not very likely (RCP4); ten deaths (15.4%) were classed as slight evidence of avoidability (RCP5); forty deaths (6.5%) were classed as definitely not avoidable (RCP6).

4. Annual deaths 2023-24

There were a total of 214 deaths in the year 2023-24. Of these, 205 have completed the review process. The remaining outstanding reviews are all from Q4. There was one avoidable death (RCP 3 >50:50 avoidable) in the year, which was in Q3. There were no deaths classified as definitely avoidable.

Of those less than 50:50 in the year 2023-24, 12 deaths (5.9%) were classed probably avoidable but not very likely (RCP4); 26 deaths (12.7%) were classed as slight evidence of avoidability (RCP5); 165 deaths (80.9%) were classed as definitely not avoidable (RCP6).

In comparison, there were a total of 223 deaths in 2021-22 and 182 in 2022-23.

There were 6 avoidable deaths in 2022-23; three with strong evidence of avoidability (RCP 2) and three probably avoidable (more than 50:50 – RCP 3). This constituted 3.3% of all deaths that year.

5. Organisational Learning from Deaths (2023-24)

A report on the deaths at LHCH in 2023-24, including a summary of the MRG review process, the main causes of deaths, and a summary of organizational learning is presented in appendix 1.

6. 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.

7. Recommendations

The Board of Directors is requested to note the report.

Appendix 1 – Organisational Learning from Death – 2023-24

LHCH Mortalities 2023/24 – All Deaths					
	Screened no Review	Screened Review Complete	Screening	Under Review	Total Deaths
Q1	33	8			41
Q2	36	13			49
Q3	45	15			60
Q4	40	15	7	2	64
Total	154	51	7	2	214

LHCH Mortalities 2023/24 – Reviewed 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)	Total
Q1	37	4			41
Q2	42	6	1		49
Q3	46	7	5	1	59
Q4	40	10	6		56
Total	165	27	12	1	205

Main Cause of Death – Cardiac /Aortic Surgery	n
High risk Procedure	10
Pre-existing Pathology	8
Heart failure – RV / LV	6
Other	6
Respiratory failure	5
Pre-procedural moribund state	4
CVA	4
Technical procedural issue inc Myocardial protection	3
Post-procedural bleeding / Tamponade	3
Mesenteric ischaemia	2
Unheralded arrhythmia	2
Sepsis	3
General deterioration in the v elderly	1
Total	57

Main Cause of Death - Thoracic Surgery	n
Respiratory failure	9
Pre-existing Pathology	5
Heart failure – RV / LV	1
Other	1
Total	16

Main Cause of Death - Medical Division	n
Heart failure – RV / LV	44
Pre-procedural moribund state	39
Pre-existing Pathology	11
Other	9
Unheralded arrhythmia	6
Myocardial Infarction	3
Mesenteric ischaemia	2
Hypoxic brain injury	2
Post-procedural bleeding / Tamponade	2
General deterioration in the v elderly	2
High risk Procedure	2
Infective Endocarditis	1
Technical procedural issue	1
Sepsis	1
Total	125

Month	% Reviewed ≤30 Allocation for Review	% Reviewed OR Screened no time frame	Deaths	Reviewed	Reviewed ≤30 days of allocation
Apr-23	75%	100%	12	12	9
May-23	92%	100%	13	13	12
Jun-23	88%	100%	16	16	14
Jul-23	86%	100%	14	14	12
Aug-23	90%	100%	21	21	19
Sep-23	86%	100%	14	14	12
Oct-23	77%	100%	13	13	10
Nov-23	86%	95%	22	21	19
Dec-23	88%	100%	25	25	22
Jan-24	82%	94%	17	16	14
Feb-24	85%	92%	26	24	22
Mar-24	62%	76%	21	16	13
YTD	83%	96%	214	205	178

Summary of mortality data

- There have been 214 deaths in the trust for the year 2023-2024, which is an increase on last year's 182 deaths. The exact cause of this rise is unclear but may reflect longer surgical waiting times, patients being in a poorer condition when they present, and the subsequent requirement for more extensive and therefore higher risk procedures.
- There has only been 1 death deemed as being probably avoidable > 50:50 (RCP 3) and no deaths with strong evidence of avoidability. Last year there were 6 deaths deemed as having evidence of avoidability (RCP 3).
- The underlying causes of death vary between specialities. Within cardiac surgery high risk procedure, pre-existing pathology and heart failure are the most common, and is possibly a reflection of patients waiting longer for their operation. 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, pre-procedural moribund state and pre-existing pathology are the most common causes. Again, this is to be expected and is reflective of the volume of patients that are admitted through the Primary PCI pathway and die following a myocardial infarction.
- Compliance with target time for completion of screens and full reviews remains challenging at 70% and 83% respectively. There are still 9 deaths from the year 23-24 that have not completed the full mortality review process. A more robust process is now in place for escalating to clinical leads and divisional medical directors to try and improve compliance with these targets.
- 47 deaths from 2023/2024 have been discussed at the Mortality Review Group (MRG).

Changes to the MRG and learning from deaths process.

- The MRG sits monthly and has been under new chairmanship since February 2023.
- Attendance at the MRG has now been expanded to give greater representation from other specialities including therapies, trainees from medicine and surgery and members of the risk and safety team.
- 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.
- A bespoke mortality module has been developed on the new In Phase system. 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.

- A new mortality SharePoint page has been developed, on to which case presentations and learning can be uploaded. This can be accessed by staff at any time, so learning is not just limited to those that were present at audit day.

Key themes, learning and actions taken.

Diagnosis of tamponade

- Some deaths have been attributed to either a missed or delayed diagnosis of cardiac tamponade.
- These cases have all been presented at audit day for discussion and learning.
- The use of trans-thoracic echo is notoriously insensitive for diagnosing and excluding cardiac tamponade in post cardiac surgical patients. This issue has been extensively discussed and the practise of performing a trans-thoracic echo has been discouraged in favour of alternative imaging such as TOE or CT.
- A talk was given by one of the imaging Cardiologists at audit day on the echo diagnosis of tamponade.
- Teaching and education have been provided for the surgical and anaesthetic trainees on this area of clinical practise.

Post-operative bleeding

- Post-operative bleeding can lead to morbidity and at times has played a significant role in causing mortality.
- This theme has been identified as contributing to some of the deaths this year.
- It was recognised that the approach to bleeding is not standardised in terms of timing and basis for blood product administration, and when patients are taken back to theatre.
- A bleeding protocol has been created by some of the surgical trainees to help guide management. This protocol has been agreed by the Surgical Consultants.
- Blood warmers have also been purchased for Critical Care to avoid administering cold blood products which can exacerbate bleeding further.

Technical issues

- Technical issues in theatre and cath lab is a theme identified in a number of mortalities that are discussed at MRG. Particular technical aspects that have been discussed include: -

- Atricleps- issues have been identified with the use of Atricleps. Mechanisms include direct damage to the left atrium causing issues with bleeding, and damage to and obstruction of a bypass graft that was sitting against an atriclep. A review is to be undertaken by the surgical division into the use of atricleps. Any further complications, not necessarily leading to death, will be logged via a new surgical complication system.
- Bypass grafts- cases have been discussed in which there were concerns about the bypass grafts, or other changes (ECG, TOE) that suggested there may be an issue with bypass grafts. These have been discussed extensively at audit day. Key learning has been appropriate use of Medistim, better documentation of concerns in post-operative handover documentation, early escalation of concerns, and encouraging early discussions with the Cardiology team for the consideration of angiography.
- Technical issues in cath lab - cases have been discussed which have involved technical issues in cath lab such as coronary artery dissection (or failure to recognise it), and not addressing the culprit vessel during the procedure. Cardiology has a robust system in place, with weekly PCI meetings, to discuss and learn from such complications.

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.
- Separate MRG teaching sessions have also been done with the surgical juniors, using these cases as examples. A handover tool has also been created to aid the trainees in providing a structured and complete handover, for when discussing with a consultant on the phone.
- Future work will also involve looking at how we use the new digital charting system and AI to help with the escalation of a deteriorating patient.

Ischaemic Ventricular Septal Defects (VSD)

- A series of a small number of patients have died as a result of a post infarct VSD. Some of these patients had undergone surgery, while some died before surgery could be performed. By its very nature, this is a condition with a very high mortality associated with it.

- There has been a recent move to early intervention in these patients, whereas previously surgery was deferred for as long as possible.
- A thorough review of the surgical management of VSDs at LHCH is currently being undertaken and will be presented at the next combined audit day. The aim will be to try and standardise our approach and timing of surgery in these patients.

Failure to rescue from cath lab

- Some cases were recently discussed at a combined audit day, where the MRG felt that earlier surgical intervention could have made a difference.
- These patients all had surgical coronary disease but had ongoing ischaemia or ECG changes and all died while awaiting surgical intervention.
- One case also involved a communication issue, when it wasn't escalated to the surgical consultant that it had not been possible to site an IABP.
- These cases highlighted the need for continued improvement in communication between the Cardiology and Surgical teams, and surgical consultant review in the cath lab of unstable coronary patients.
- There are also plans for creation of an urgent surgical coordinator role, to improve links between cardiology and surgery.

Delayed recognition of death on the ward

- A few deaths were identified where the patient had actually died during the night, but this had not been recognised during the nursing comfort checks.
- Changes have been made to these checks, so that breathing is now confirmed as part of the comfort check.

Management on Critical Care

- Issues have been identified as areas that could have been improved in the care of some patients.
 - Review of ventilation settings prior to extubation- the need for better communication between the ICU nursing and medical team was identified. This has been shared with the nursing and medical teams as learning.
 - Earlier involvement of critical care medical team in complex post-op patients- traditionally post-operative patients would fall under the care of the ANP and surgical team in the first few days of their operation. However, as patient complexity has risen a need has been identified for earlier involvement of the crit care medical team. Time since operation is no longer used as a discriminator in terms of who looks after the patient, it is now solely based on clinical need.

Delays in care due to long waiting lists/lost on waiting list

- The impact of long waiting lists has been a factor in several deaths. By the time of surgery patients' clinical condition and pathology has worsened, meaning that more extensive complex surgical intervention is required.
- Longer waiting lists also mean that some investigations, such as angiograms, are not up to date when it comes to the time of their operation. Certainly, in one case this led to an iatrogenic death from the complications of an angiogram.
- An issue was also identified with one patient who had been lost from the surgical waiting list due to problems with administrative processes.
- A new Safer Waiting List management group has been formed to address some of the above issues.

High risk procedures/MDT

- As described some 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. 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.