BMJ Open  NHS ‘Learning from Deaths’ reports: a qualitative and quantitative document analysis of the first year of a countrywide patient safety programme

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ABSTRACT

Objectives To review how National Health Service (NHS) Secondary Care Trusts (NSCTs) are using the Learning from Deaths (LfD) programme to learn from and prevent potentially preventable deaths.

Introduction Potentially preventable deaths occur worldwide within healthcare organisations. In England, inconsistencies in how NSCTs reviewed, investigated and shared LfDs, resulted in the introduction of national guidance on ‘LfDs’ in 2017. This guidance provides a ‘framework for identifying, reporting, investigating and LfDs’. Amendments to NHS Quality Account regulations, legally require NSCTs in England to report quantitative and qualitative information relating to patient deaths annually. The programme intended NSCTs would share this learning and take measurable action to prevent future deaths.

Method We undertook qualitative and quantitative secondary data, document analysis of all NSCTs LfDs reports within their 2017/2018 Quality Accounts (n=222).

Results All statutory elements of LfDs reporting were reported by 98 out of 222 (44%) NSCTs. The percentage of deaths judged more likely than not due to problems in healthcare was between 0% and 13%. The majority of NSCTs (89%) reported learning from deaths and take measurable action to prevent future deaths.

Conclusions The wide variation in reporting demonstrates that some NSCTs have engaged fully with LfDs, while other NSCTs appear to have disengaged with the programme. This may reveal a disparity in organisational learning and patient safety culture which could result in inequity for bereaved families. Many themes identified from the LfDs reports have previously been identified by national and international reports and inquiries.

INTRODUCTION

Globally, adverse events while receiving healthcare is a leading cause of morbidity and mortality.1 The percentage of preventable or potentially preventable deaths is likely to lie somewhere between 0.5% and 8.4% of hospital deaths.2–6 In England, between April 2017 and end of March 2018, there were 299 000 deaths occurring in hospital within 30 days of discharge, this amounts to an estimate of between 1495 and 25116 potentially preventable deaths.7 There is a moral imperative for healthcare organisations to learn from these deaths and take measurable action to prevent potentially preventable deaths.

Healthcare organisations are made up of individuals who have the ability to learn, however, organisational learning is ‘more than the sum of individual learning’ and is distinct from unreflective action taking.8 It is more than simply creating change for change’s sake, as an ‘illusion of learning’.9 Organisational learning is the ability to

Strengths and limitations of this study

► This is the first study to our knowledge to analyse Learning from Deaths (LfDs) reporting.

► Quality Accounts from all National Health Service Secondary Care Trusts (NSCTs) in England legally required to report LfDs were included in both the qualitative and quantitative analysis. Including all NSCTs in the qualitative analysis has ensured complete and thorough data capture. Despite attempts to minimise inherent researcher bias, the qualitative analysis may have been influenced by to some extent.

► This study has ensured the inclusion of views from bereaved relatives, through patient and public involvement. The authors conclude that these views are essential to improving patient safety.

► This is an analysis of the very first year of LfDs reporting and reports could underrepresent current NSCT engagement in the LfDs process.

► NSCTs may be undertaking elements of the LfDs programme that were not statutory reporting requirements such as family/carer engagement, but not reporting on these as it was not a regulatory requirement.
apply knowledge and understanding to increase effective organisational action. Effective organisational learning is crucial to improve patient safety and probably requires both safety-I (understanding why things go wrong) and safety-II (understanding why things go right) approaches. Central regulation and performance management may have some effect on improving care, but quality improvement, leadership, public engagement, proper resourcing, education and training are needed for a safer health service.

In April 2016, an independent review demonstrated a lack of systematic approach and meaningful change in response to unexpected deaths at Southern Health National Health Service (NHS) Foundation Trust. The Care Quality Commission (CQC), which is responsible for monitoring, inspection and regulation of healthcare services within England, conducted a wider review into the investigations of deaths. They found inconsistencies in the way NHS Secondary Care Trusts (NSCTs) became aware of, investigated and shared learning from deaths (LfDs). In response, the NHS launched a new programme of work to improve standards. This included national guidance on ‘LfDs, providing a framework for NSCTs on ‘identifying, reporting, investigating and LfDs in care’. The objectives of the guidance included supporting the NHS in England to develop an understanding of why deaths arising from problems in care occur, with the aim of ensuring that findings are shared and acted on, to prevent recurrence. In July 2017, guidance was published on implementing the LfDs framework at NSCT board level, and amendments to statutory regulations followed. These changes made annual reporting of both quantitative and qualitative information relating to patient deaths a legal requirement in England (NHS quality account regulations 2010 (2017 No.744)). The reporting mechanism was built into the NHS ‘Quality Accounts’ system—where NSCTs are legally required to produce a publicly available annual report about the quality of their services (UK government legislation).

Guidance was not given on expected number of deaths, how to judge if a death was more likely than not due to problems in care, or on examples of learning, actions or how to assess impact of any actions. It was instead left to individual NSCTs to decide how they would undertake these requirements. Guidance was given that NSCT board leadership should ‘shares relevant learning across the organisation and with other services’, and that NSCTs should ‘engage meaningfully with bereaved families and carers’. It was not a statutory requirement to report on bereaved family and carer engagement or to report sharing of learning. This study analyses if NSCTs are reporting as legally required, evaluates the quality of reporting, and determines whether there is evidence of effective organisational learning, sharing of learning and engagement with bereaved families and carers.

### METHODS

This is a qualitative and quantitative study of an NHS safety improvement programme. We undertook analysis of 2017/2018 Quality Account data from NSCTs in England. We excluded Quality Accounts from ambulance trusts because in 2017/2018 they were not required to report. This study has been reported using Standards for Reporting Qualitative Research.

Our objectives were to describe the quality of reporting, and to thematically analyse the reports to derive key learning for the NHS and beyond. We undertook analysis of LfDs as set out in the 2017 amendment to the NHS 2010 Quality Account regulations.

Our evaluation of the quality of reporting involved review of compliance of reports against regulation numbers 27.1–27.6 (table 1). Where NSCTs did not fully report we sought to understand why this may have been the case from comments within the Quality Account itself.

In addition to statutorily required reporting, we also looked for evidence within the 2017/2018 LfDs report of family/carer engagement, which included evidence of involvement in learning and/or addressing family/carer concerns and/or appointing family liaison officer or similar as a result of a patient death. We also looked for evidence of sharing LfDs incidents both within the NSCT and more widely (eg, with other organisations). Both sharing learning and family/carer engagement were recommended in the LfDs national guidance.

Quantitative analysis of regulation 27.1–27.3 was undertaken and reported using descriptive statistics.

| Regulation no | Summary of regulatory requirement |
|---------------|----------------------------------|
| 27.1          | The no of patients who have died during the annual reporting period. |
| 27.2          | The no of the deaths (in 27.1) that have undergone a case record review or investigation. |
| 27.3          | An estimate of the no of deaths in 27.2 which the NSCT judges to be more likely than not to have been due to problems in care, with explanation of method to assess this. |
| 27.4          | What the NSCT has learnt from reviews/investigations in relation to deaths (in 27.3). |
| 27.5          | A description of the actions the NSCT has taken or will take in response to what they have learnt. |
| 27.6          | An assessment of the impact of the actions (from 27.5). |

LfDs, Learning from Deaths; NSCT, National Health Service Secondary Care Trusts.
Qualitative analysis to derive key learning themes from regulations 27.4–27.6, sharing learning and family/carer engagement was undertaken through document analysis as described by Bowen20 using both content and thematic analysis, and through exploratory data analysis.21 22 Both deductive and inductive approaches were used. We first identified initial LfD reports and action themes for reporting, and then developed a classification system for these. The first investigator (ZB) reviewed and analysed twenty 2017/2018 quality accounts, undertook open coding (inductive) and combined this with information presented at the NHS Improvement London LfDs Network (October 2018), where themes (mixed learning and action) from London NSCTs were discussed (deductive). Following the initial review, we reviewed the further 202 NSCT 2017/2018 Quality Accounts. Each Account was reviewed by the same reviewer twice to ensure full data capture. Researchers used the process of bracketing to reduce subjective analysis.23 During data capture further themes emerged, were modified, merged and changed iteratively. Recurring themes were identified using exploratory data analysis,24 coding, identification of themes, recoding and using frequency charts. Data were captured in Microsoft excel (V.16.15).

Patient and public involvement
This study forms part of a larger programme of work which is overseen by a public and relatives steering group to improve relevance from the perspective of those affected by deaths in healthcare and to reduce biases from the healthcare staff researchers. The steering group have been involved in the planning, design and development of conclusions, through face-to-face meetings and email correspondence. The involvement of a steering group member in authoring this paper has significantly and positively influenced the reporting of this study, ensuring focus on reporting family involvement. The authors reflect that patient and public involvement (PPI) has been essential to this study to ensure that the views of bereaved family members were central to the concerns examined. The reporting of PPI has been undertaken using guidance for reporting involvement of patients and the public 2—short form.24

RESULTS
Quality Accounts were reviewed for all 222 NSCTs in England.

Quality of reporting
Ninety-eight out of 222 (44%) NSCTs reported all six statutory elements of the LfD reporting framework. Two NSCTs did not report any parts of the LfD reports regulatory requirements.25 26 The total number of deaths reported (regulation 27.1) varied from 3 deaths to 7756 deaths (median 1210.5, range 7753).27 28 The number of case record reviews or investigations undertaken relative to the number of patient deaths in individual NSCTs varied between 0.2% and 100% of deaths; the average was 43.7% (median 36.5, range 99.8).

Number of deaths which the NSCT judges to be more likely than not to have been due to problems in care, with explanation of method used to assess this
There was variation between 0% and 13% in the number of deaths which the NSCT judged to be more likely than not to have been due to problems in care (median 0.2, range 13). Twenty-two NSCTs did not report any figure in this section of the quality accounts, reasons given for this included:
► ‘Data collection challenges’.29
► ‘Unable to provide a reliable figure’.30
► ‘We do not carry out investigations with a view to determining whether the death was wholly or partly due to problems in the care provided’.31
► ‘Currently, no research base on this for mental health services and no consistent accepted basis for calculating this data’.32

A total of 111 out of 222 NSCTs (50%) noted the use of Structured Judgement Reviews (SJRs) (either Royal College of Physicians or Royal College of Psychiatrists) either alone or in combination with other forms of investigation or review to assess problems in care.33 NSCTs not using SJRs used a variety of other methods including: Confidential Enquiry into Stillbirths and Deaths in Infancy framework, Root Cause Analysis and PReventable Incidents Survival and Mortality methodology.34 35

Plans for assessment of impact
Regulation 26.6 asked NSCTs to undertake ‘an assessment of the impact of the actions’. 105 out of 222 NSCTs (47%) discussed assessment of impact. This includes trusts that had a plan of any sort including a future plan. Several NSCTs used audits and/or quality improvement projects to check that actions are implemented. One NSCT stated ‘Many of these actions are difficult to objectively assess in terms of their impact as they may relate to rare occurrences, which are difficult to meaningfully audit’.36 The 47% of NSCTs who had a plan for assessment of impact does not include NSCTs that acknowledge the need to assess the impact but stated that it was too early to be able to undertake this (or words to this effect).37 38 Some NSCTs have reported the results of the assessment of impact that they have already undertaken.39 Several NSCTs appear to have misunderstood, for example, reiterating the purpose of the LfD programme, instead of assessing impact.40 41

Evidence involvement of family/carers in learning
In the 2017/2018, LfD reports 37 out of 222 NSCTs (17%) mentioned the involvement of families/carers either in the investigation process or in shared learning or that they communicate with/support/engage/consider families/carers after a patient dies.42 43 A good example of working with families from one NSCT LfD reports state: ‘The Trust continues to learn the importance of communication
with families after a death has occurred and that through meaningful engagement after a death by inviting them to contribute to the terms of reference for investigations a more detailed, meaningful and richer account of the person’s care and treatment is realised. One NSCT LfDs report discusses that as an action undertaken they sought to gain better education and training for staff about the importance of positive family engagement through expert external training. Thirty-eight NSCTs (17%) discussed as an ‘action’ that they plan to work with/communicate with/engage/support families/carers. Many of these NSCTs are the same NSCTs already undertaking family/carer engagement.

Evidence learning shared more widely
In the 2017/2018, trust LfDs reports 106 out of 222 NSCTs (48%) have shared or plan to share the learning more widely within their own organisation, through a variety of communication mediums: Face to face meetings or events, intranet (as case studies, safety alerts, newsletters). Seventeen out of 222 (8%) NSCTs have shared or plan to share the learning outside their organisation, with neighbouring NSCTs or other national organisations.

Key findings from the reports
Lessons learnt
Regulation 27.4 asks NSCTs to describe ‘what the provider has learnt from reviews/investigations in relation to deaths’ where this was related to deaths which the NSCT judged to be more likely than not to have been due to problems in care (regulation 27.3). 25 out of 222 NSCTs (11%) did not report any lessons learnt from deaths; of these 25 NSCTs, 9 NSCTs had reported 1 or more death judged to be more likely than not due to problems in care, the other 16 NSCTs had either reported zero deaths judged to be more likely than not due to problems in care or had not reported. However, 49 out of 222 NSCTs (22%) which reported that they had no deaths judged more likely than not due to problems in care, also reported lessons learnt, many caveating this with an explanation that they had learnt valuable lessons through the process of case note review/investigation. The most common learning themes from all NSCTs who reported learning can be found in table 2. An overview of the themes arising can be found in the frequency table (figure 1).

Some NSCTs have undertaken analysis of their learning and described common themes. Some have gone into great detail. Others have described a specific case or cases. Some NSCTs have identified learning and actions together, without differentiating the learning from the action. The lack of structure in reporting makes it difficult to always understand exactly what the problem was leading to the learning. Some NSCTs identified ‘Good practice’ as learning points. Occasionally NSCTs did not necessarily learn from patient deaths, but from the overall LfDs process.

Actions taken or planned to be taken
NSCTs were asked to undertake ‘a description of the actions the NSCT has taken or will take in response to what they have learnt’. Thirty out of the 222 NSCTs (14%) did not report any actions taken as a result of learning. One reported that they felt they were ‘at too early a stage of development to be able to take actions from specific learning’. The most common action themes from all NSCTs who reported actions can be found in table 3. An overview of the themes arising can be found in the frequency table (figure 2).

The level of detail with regards to actions taken varies greatly with some NSCTs listing some specific actions as bullet points. Others have described a specific case or cases.

DISCUSSION
This study demonstrates wide variation in both the quality of reporting and the findings from LfDs reports. Considering this is a new programme, introduced part-way through 2017/2018, with limited guidance, the overall findings are somewhat encouraging. Nearly all NSCTs reported at least one or more element of the statutory LfD requirements. Most NSCTs reported lessons learnt and/or actions taken, while less than half discussed assessment of impact. The lessons learnt were varied. The most common learning theme reported was poor communication, with the most common action theme reported being; review of process/standard operating procedure/pathway.

Quality of reporting
Reporting variation may be due to differences in interpretation of the guidance and statutory requirements. There is

Table 2 The five most common learning themes across all NSCTs

| Learning themes                                                                 | No of NSCTs citing theme, (%) |
|---------------------------------------------------------------------------------|-------------------------------|
| Poor communication (including language barrier and problems with handover)       | 90 (46)                       |
| Problem in recognition and escalation of deteriorating patients                 | 83 (42)                       |
| End of life planning or treatment escalation planning not evident/incomplete    | 82 (42)                       |
| Problems with documentation including consent, details patient team and NOK     | 80 (41)                       |
| Lack of clinical knowledge, consideration differential/delay diagnosis or seeking advise | 53 (27)               |

NOK, next of kin; NSCTs, National Health Service Secondary Care Trusts.
no direct financial penalty for an NSCT not reporting some or all elements of the LfDs statutory requirements in their Quality Accounts. However, penalties can arise during CQC inspections, when an assessment of implementation of LfDs is carried out.59 60

The different approaches taken by NSCTs and the heterogeneity of data makes comparison difficult. The variation in the percentage of deaths being reviewed/investigated may be due to some NSCTs not having the capacity to review/investigate cases, collect and/or report accurately. NSCTs with a very small number of deaths may find it easier to review all deaths than very large NSCTs. Some NSCTs have had mortality review processes in place for several years and have already been reviewing/investigating deaths, making implementation of the LfDs process easier since the structure for reviewing cases and personnel required are already
in place. Some NSCTs may have felt at risk from negative attention by declaring total numbers of deaths and deaths judged more likely than not due to problems in care. Many NSCTs did, however, report despite the same risk. It is clear from the LfDs reports that several NSCTs, particularly some mental health and community NSCTs, did not feel that the guidance applied to them, however other similar NSCTs were able to comply with reporting. The results could suggest guidance was written with acute NSCTs in mind and perhaps need to be reconsidered for non-acute NSCTs. Similar findings were noted by the CQC in their report ‘LfDs: A review of the first year of NHS trusts implementing the national guidance’.60

The variation in deaths judged more likely than not due to problems in care is larger than those noted in the national guidance’.60 ‘LfDs: A review of the first year of NHS trusts implementing the national guidance’.60

The five most common action themes across all NSCTs

| Action themes                                             | No of NSCTs citing theme, (%) |
|-----------------------------------------------------------|-------------------------------|
| Review of process/standard operating                     | 128 (67)                      |
| procedure/pathway                                         |                               |
| Highlight guidelines or protocols/policy use of           | 96 (50)                       |
| guideline/policies or protocols/treatment bundle/toolkit  |                               |
| Implementation programme of work/education/bundle         | 96 (50)                       |
| Quality improvement work or similar                       | 90 (47)                       |
| Work to improve communication/collaboration/shared learning | 62 (32)                      |

NSCTs, National Health Service Secondary Care Trusts.

Key findings from the reports

Overall consistency with regard to identifying, reporting, investigating, LfDs in care and taking action has improved across most NSCTs. The continual process of learning, action and reflection which characterises effective organisational learning is essential to ensure the change necessary for safer healthcare. This can only be achieved where information and knowledge affecting patient safety is easily accessible to all members of healthcare staff, supporting an overall safety culture.10 66

Only a small number of NSCTs did not report any learning, suggesting that most NSCTs were able to engage with this aspect of reporting. Many NSCTs have effectively described lessons learnt and actions taken. However, most of the LfDs report recommendations or actions are fairly non-specific; further detail of actions and their measurable impact would be helpful.

It is of concern that the majority of these lessons and recommended actions have previously been identified in national and international reports and inquiries, looking at the problems associated with preventable deaths. Similar problems found in this study are also highlighted in these reports; poor clinical monitoring, poor recognition of the deteriorating patient, diagnostic errors, poor communication, lack of end of life planning, lack of information sharing between services, inadequate drug and fluid management.67–75 This suggests many of the same problems reoccur and that healthcare systems do not learn from previous failings and adds weight to the proposition that the NHS as a whole cannot become a learning organisation.76 In view of this, it is reasonable to question whether the learning of quality by the CQC.61 Guidance on evaluating the impact of interventions is widely available.62 63
arising from LfDs reporting will result in meaningful change. If LfDs findings and recommendations are not implemented, systemic redundancy in the initiative is implied. While individual healthcare practitioners do need to take some responsibility, NSCTs and the DHSC should look at systems, such as institutional accountability and LfDs programme oversight to optimise outcomes and minimise the risk of fatal patient safety incidents occurring. This lack of change adds to the growing body of evidence suggesting that traditional approaches to organisational learning in healthcare, such as learning from when things go wrong (safety-I) have limited effect and may suggest a role for increased learning from the patients who have experienced excellent patient care and outcome despite being seriously unwell (safety-II).77

Recommendations
In view of the findings from this study, in order to improve reporting quality, our recommendations are as follows:

► A more structured LfDs reporting template, including all regulatory requirements should be implemented through the Quality Accounts.

► NHSE/I-specific guidance should be developed on how NSCTs can undertake ‘an assessment of the impact of the actions’.
To reinstate LfDs robust regulatory reporting oversight in addition to CQC inspections. In order to improve ‘learning and action’ from deaths, our recommendations are:

- Annual collection and collation of all NSCT LfDs reporting that is made publicly available.
- Further investigation into how NSCTs currently involve bereaved families and carers.
- Investment in leadership and support for NHS staff to enable a safety culture.

Methodological limitations

This is an analysis of the very first year of LfDs reporting and reports could underrepresent current NSCT engagement in the LfDs process. NSCTs may be undertaking elements of the LfDs programme that were not statutory reporting requirements such as family/carer engagement, but not reporting on these as it was not a regulatory requirement. NSCT LfDs reports were not created for research analysis and are not standardised, this heterogeneity and subjectivity within the reports reduces equitable comparison.

Despite attempts to minimise inherent researcher bias, such as through PPI involvement and the process of bracketing, the qualitative analysis may have been influenced to a limited extent.

CONCLUSION

Organisations are variably reporting against LfDs regulations, with overall improved consistency in the way that NSCTs identify, report, investigate and learn from deaths in care since the CQC review. However, more could be done to enhance and strengthen the programme impact, and to assess whether LfDs reporting reflects NSCT LfDs engagement.

On the basis of findings from the 2017/2018 LfDs reports, national programmes led by multidisciplinary healthcare practitioners should be developed to tackle the most common problems which may have contributed to patient deaths. In the first instance programmes tackling the following issues should be developed or strengthened:

- Improving communication.
- Involvement of families in care and in learning.
- Processes to share learning (locally and nationally).

Further work is needed to understand which actions taken by NSCTs result in the biggest impact and for this learning to be shared. While LfDs can be difficult and emotive it is fundamental that healthcare systems ensure learning and impactful change occurs.

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Contributors

ZB conceived and designed the study, undertook analysis, interpretation of the data and drafted the manuscript. CV-P provided critical input to the design, analysis, interpretation of the data and revised the manuscript critically. DB provided critical input to the design, analysis, interpretation of the data and revised the manuscript critically. SRM provided critical input to the design, analysis, interpretation of the data and revised the manuscript critically. The corresponding author attests that all listed authors meet authorship criteria and that no others meeting the criteria have been omitted. ZB is the guarantor.

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Competing interests

ZB worked at NHS Improvement in the medical directorate from August 2017 to August 2018, during which time she undertook some work on the LfDs programme. SRM is the National Clinical Director for Critical and Perioperative Care for NHS England/NHS Improvement, SRM has no link with the LfDs programme.

Patient and public involvement

Patients and/or the public were involved in the design, or conduct, or reporting, or dissemination plans of this research. Refer to the Methods section for further details.

Patient consent for publication

Not required.

Provenance and peer review

Not commissioned; externally peer reviewed.

Data availability statement

Data are available in a public, open access repository. All the data for this study are publicly available from the 2017/2018 NHS Quality Accounts.

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