Dudley Group Foundation Trust Group
Emergency Department Mortality Review Summary

(Including an update on governance and progress**)**

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Introduction

In response to concerns raised by the regulator, the Care Quality Commission (CQC), about the safety of care at Russells Hall emergency department (ED), Dudley Group Foundation Trust (DGFT), in requested an independent review of deaths occurring within the department during the period December 2017 to June 2018. These deaths totalled 169 during this period. It is important to note at the outset that there is no defined benchmark for the number of deaths to be expected within an emergency department and that our review was aimed at looking at the quality of care and potential avoidable factors in the individual cases. DGFT also requested that the review team looked at historical deaths within the ED from the preceding year. 60, randomly allocated, cases were analysed from deaths occurring over a full year. The reviewers, using the Royal College of Physicians (RCP) 'structured judgement review (SJR)' tool scrutinised the case records generated in the ED, the CasCard, and evidence supplied by the West Midlands Ambulance Service of pre-hospital care and handover processes at Russells Hall hospital (RHH).
DGFT in cooperation with NHS Improvement, also requested a review of current governance arrangements within the organisation on how deaths are monitored and reviewed and how appropriate actions are put in place to minimise harm. The review team spent a substantial time within the trust to:

- Observe the emergency department and acute services within the hospital
- Interview key staff including the ED departments' clinicians and managers, as well as senior officers in the trust
- Review current documentation of governance procedures in the organisation and to critique the current arrangements

DGFT is a large district general hospital supporting a local population of approximately 450,000 citizens. It offers a comprehensive range of services, but some conditions are diverted elsewhere for more specialised treatments. These include acute heart disease and major trauma. The department is almost always busy and close to capacity. It often copes with up to 350 attendances a day at its emergency department. This is in addition to those streamed to an adjacent urgent care centre. Over the last two years there has been a 7% rise in attendances in the ED. The streaming of less urgent cases to the urgent care centre inevitably leads to a greater number of more severely ill patients in the department.

The department is some distance from the acute medical and surgical wards and currently has no adjacent admission unit. There are defined areas for triage in two areas, the reception area and the receiving area for ambulances. After triage, patients are assigned, according to the severity of their illness, to either waiting areas or bays for direct observation and care. In those most at risk these observations are supplemented with constant measurement of vital signs displayed in a central observation area. The ED attempts to score the severity of illness using an initial triage tool (five categories) and additionally through the nurse assessed early warning system (NEWS) score. Radiology facilities are close to the department for urgent investigations and within the department there is near patient testing for blood gases and some haematology.

There are regular board rounds and nurse led 'safety huddles' to ensure that appropriate actions are being undertaken to treat patients in a timely and safe manner. There is also an often-used facility of in-reach by acute physicians to advise on the management of those patients awaiting transfer to the acute wards.

Our review was undertaken in June 2018 and the final report submitted in late October. The current document is a summary of our findings, recommendations and a brief update on the trust's response thus far. The findings have been reported to a multi-stakeholder group including local commissioners, NHSI and CQC at a meeting in October 2018.

The purpose of this summary is to summarise our findings and recommendations, and to update on progress within the trust thus far. We present these as a series of questions

1. *What did the review team find when they visited the emergency department and wards?*

2. *What were the findings of the case reviews?*

3. *How does the trust investigate and respond to deaths in the hospital?*

4. *What are our recommendations?*

5. *What has happened since our review?*

1. What did the review team find when they visited the emergency department and wards?

The review team which consisted of four clinicians drawn from emergency medicine, paediatrics, nursing and general practice made several visits to the ED and acute wards. The visits were made during the day and the late evenings. 24 members of staff were interviewed, some on more than one occasion.

On all of our visits the ED was busy, and at one point there were 93 patients within the department. It was not uncommon for five or more ambulances to be handing over patients to the ED and all cubicles/bays were full. Despite this there was no sense of panic or disruption. Staff were under significant pressures and many patients had breached the accepted waiting times of 4-hrs. Transfer times from the arrival of ambulances were also delayed.

Where we found good practice were in the active use of triage tools and NEWS scores, telemetric observation of patient's vital signs, active management of the unit through the lead doctor and nurse and active liaison with the acute physicians for patients with prolonged stays in the department. We observed 'safety huddles', in practice, and the use of white boards to ensure patients were being conditions were managed continuously. There is a well-managed 'minors' area and patients in the major's area were observed often and with compassion. No cries for help were heard. The resuscitation area is rather isolated but wasn't busy during our visits. The latter is small (four bays) and our ED consultant commented that it requires expansion and to be more integral with the ED.

We found evidence of an increased monitoring of patients who are, or may be, about to deteriorate and those at risk of major sepsis. Guidelines for staff were plentiful and present in the clinical areas for reference.

There is a designated paediatric area within the ED which at the times of our inspection was well staffed but small and by common opinion of attendant staff and management requires expansion and development.

Areas of concern, reported by the review team, were to be found in the ambulance triage area. This was uniformly busy, handovers often delayed and the handover areas (12 cubicles in total) are often full. Patients while awaiting investigation or admission are frequently 'transited' here often for long periods. We also observed staff within the ED to be working at the limits of their capacity. This was partly due to the demands of a full and busy department, but additionally due to shortfalls in clinical staff. Our main report and its appendices highlight the requirement of more medical staff in the department which at times can be several full time equivalent consultant staff short and like many ED departments in the UK there is a high dependency on locums and temporary staff. While not inherently dangerous, such circumstances, do cause difficulties in consistency and team development. The trust has seen significant improvements in consultant coverage, meeting the 16-hr RCEM standard despite the ever present challenges to staffing levels.

We visited the acute medical wards including the acute medical unit (AMU). The wards are usually near full occupancy and the attendant clinicians busy managing current cases. Specialists clinicians at a junior and senior level are often busy on the wards and when an opinion is required, in the ED, delays are common. We highlight this phenomenon in our case review section below. A consistent view, by clinicians in the ED, was that there are significant delays in specialist assessment of patients referred to them and that while the attendant physicians who worked within the department was useful, delays in transfer to the medical wards was of concern.

The trust is actively seeking to improve the availability of senior specialist assessment to improve patients' access to appropriate care, and is working with several agencies to do so. An example is the recent intensive work with ECIST (emergency care intensive support team). Despite these significant efforts at service improvement, on interviewing several senior consultants in the ED and their junior staff there was a view that there is a disconnect between the senior managers of the trust and themselves. The trust has commenced a series of changes to the department and acute floor to improve flow and care. Some of these have not been communicated effectively and this has caused a belief of a 'top down' approach to decision making. Contextually the trust is responding often to external criticism, and is having to do so promptly. The recent appointment of a new clinical head of department has improved the situation.

Staff were well aware of the scrutiny the department were under following the initial and then four subsequent unannounced CQC visits. All reported that this had put the unit 'on edge' and in their view was having an impact on performance. Most staff understood the concerns found by the CQC, and all wished to contribute to the recovery and success of both the ED and the wider hospital.

2. What were the findings of the case reviews?

We studied the records of 229 patients who died within the department. We utilised the RCP's SJR and all cases were assessed by a single reviewer for consistency. Additionally, a second reviewer randomly assessed selected individual cases to benchmark and assure consistency, and all cases where concerns were raised. The reviewers could access patients records via their CasCard, WMAS (West Midlands Ambulance Service) records, additional hand-written notes and coroner's referral letters.

The notes from WMAS are easy to understand follow linearly and record physiological and diagnostic information. Additionally, where appropriate photography of clinically relevant information is available. The ED record was available for all cases. During cardiac or respiratory arrest recording information is often retrospective after confirmation of death. The CasCard record is often difficult to follow and at times can be less than clear when interventions accurately took place. The entries were often non-consecutive and are grouped by profession and observation rather as a timeline. On occasions it is difficult to know what grade of staff made the intervention. There is a separate paper-based recording of clinician's findings and actions made by the non-ED attendant clinicians. This impacts on the accuracy of what happened, but the reviewers felt confident they could recognise most actions that had occurred and could make logical sense of the events that unfolded.

Our reviews of the 229 cases from two cohorts (169 from 2017/18 and 60 from 2016/17) took place during August to October 2018. The trust has already made plans to a new and more consistent electronic medical record within the ED which will commence in January 2019. One of the review team has observed the new record system and it is a significant improvement on the current one. This is important as the deaths within the ED will then be able to link up to the 'electronic mortality tracker' available elsewhere in the trust.

Through the structured judgment review we were able to evaluate several areas of care both in the ED and to some extent the wider health system. The review criteria are explained in part two of our report and only important highlights of our findings are communicated here. We were actively looking to recognise good as well as poor care . We looked for themes that could assist the trust in improving care and where recognised avoidable factors which may have been present. Reducing harm is recognised internationally as a major area of development in healthcare. The trust working with its partner Virginia-Mason from the US (as part of an NHSI organised cohort), and through its own 'human factors' group is actively looking at ways of doing so. The trust also has an ongoing partnership with AQUA (advancing quality alliance) evidenced in ongoing work on patient safety in the organisation. We evidenced these during our visits to the trust during our review.

Mortality attributed to trusts has been available for some years and the most commonly used relative statistics are the SHMI (summary hospital mortality indicator) and HSMR (hospital standardised mortality ratio), which at the time of the review were not a cause for concern and within the recognised normal variation across trusts in the NHS. Deaths recorded in the ED are not included within these data sets. There is no national statistic on the expected number of deaths in ED , indeed it would be difficult to do so as many of the factors contributing to such data lies out with the workings of the ED. These are highlighted in our report.

We compare two cohorts which while largely comparable in demography, are different in one respect. The 169 deaths recognised by the CQC represented a 7-month period over the busy winter and spring period, whereas the 60 randomly allocated cases came from a full calendar year. This may have a small effect on the comparative data presented.

We report the following findings

- 57% of deaths were preceded by an out of hospital cardiac arrest.
- 50% of deaths occurred within the first hour of arrival in the ED after substantial and often prolonged attempts at resuscitation. The reviewers view is that the vast majority of these cases were irretrievable and many should have been dealt with in an out of Hospital setting.
- The median time spent in the department was over 5 hours, 80% died within 4-hrs of admission, but the range was up to 16hrs post admission.
- On occasions, because of the lack of available specialist input and delays in transfer to an acute ward, patients with very complex needs were managed within the ED during peak hours of activity.

- Overall excellent, good or adequate care remains high at 93% for the year 17/18 but down on the previous year.
- The reviewers noted a small increase in the numbers in the 'adequate, poor and very poor' categories in the 17/18 cohort. Trend analysis like this is important when considering the trusts interventions to 'get back on track'.
- Avoidable factors that may have had an impact on a patient's condition or death do not signify causality. Our findings especially where there was a definite, strong or probable impact on care of avoidable factors requires considerably more investigation than the current mortality review could deliver. Where significant findings which concerned the review team were present we agreed with the medical director of the trust that further root cause analysis would be required.
- Overall the more significant scores for avoidability of harm were infrequent but the trend was upwards from 16/17 to 17/18.
- Our recording of no evidence of avoidable factors are 93% in 16/17 and 84% in 17/18.
- Evidence of probable or strong possibility of avoidable factors was 2% in 16/17 and 7% in 17/18. There were no cases recorded of definite evidence of avoidable factors.
- From our research into international comparisons, which are rare, these figures are not exceptional but this is no reason for complacency as trend analysis is downward.
- We recognised eight cases out of the 229 deaths where we had concerns over the care delivered during their time in the department. These cases have been presented to the trust and following the principles of the 'duty of candour' all families will be informed. We have not published the cases thus far, protecting the identity of those who were affected. The trust will ensure the necessary steps are taken to investigate the possible deficiencies in care and what lessons to be learnt are and responded to. While details of every case cannot be explicitly reported we recognised the following themes where the trust will wish to act
    - Appropriate and timely referral to specialist opinion and management
    - Individual error in assessment of diagnosis and escalation to senior specialist opinion by junior staff
    - Appropriate observation following triage, especially for patients with significant but as yet ill-defined diagnosis (sepsis and abdominal pain as examples)
    - Delays in diagnosis were most apparent during long stays within the ED at times of high workload and demand
    - Safeguarding concerns were highlighted in one case following a recent discharge from acute care
- Clinical record; The reviewers were concerned about the adequacy of the current CasCard system and are keen that a move to the new Sunrise system is not delayed.

A significant number of conveyances to the ED have already had an out of hospital arrest and extensive attempts at resuscitation. The vast majority are 'non-salvageable' and beyond

any chance of recovery. A significant number, had a DNR CPR (do not resuscitate, or attempt cardio-pulmonary resuscitation) in place but this wasn't always seen or recognised by the attendant ambulance team. We highlight this in our recommendations several times as it is unnecessary, inappropriate and often distressing for patients to be transferred with no or only a slight chance of recovery.

3. How does the trust investigate and respond to deaths in the hospital?

An essential part of our task, reported fully in part-1 of the mortality review, was to critique the trust's current governace arrangements in relation to deaths within the organisation. By their very nature hospitals providing acute care will care for those most at risk of significant and life-threatening illness. Most deaths are unavoidable and occur as a result of overwhelming physical illness usually later in life. Since the second report into the Mid-Staffordshire Trust by Sir Robert Francis and the subsequent investigation of raised mortality in the Keogh reviews, there has been a keen emphasis on reducing avoidable deaths across the UK. DGFT was one of the 14 trusts reviewed by Sir Bruce Keogh, the then Medical Director of NHS England. Our review looked at the current governance structures and how these impact on reducing avoidable mortality.

Our findings showed an active culture of investigating deaths occurring within hospital (and up to 30 days post hospital care) but the system was complex.

We were impressed by the digitally recorded 'mortality tracking system (MTS)' and the expectation of rapid reporting and review by clinicians of deaths within their speciality. While this didn't as yet extend to the ED as reported above this will be included by December 2018. The trust has performed an internal review of the deaths in ED and this was made available to the review team. We report later of the trust developing this further.

The medical director is responsible for overseeing the organisation's response to deaths under its care. He, with the chief executive officer, is accountable for such processes and responding to any significant concerns in clinical care. The system in place codes and audits deaths within 21 days, and compliance with this is above 95%. The reviews are scrutinised by the mortality assurance group and further by the mortality surveillance group both led by senior clinicians. As a result, the trust produces a 'learning from deaths' report and this along with the findings at the assurance/surveillance groups reports to the trust board via an additional committee led by a non-executive director, the CQSPE (clinical quality, safety and patient experience). The board has ultimate responsibility for responding to concerns over the safety and care of patients within the trust and there is an escalation pathway through the various divisions of the trust where this is discharged.

The reviewers found that the CQSPE reported concerns to the Trust Board, but that some of the narrative on mortality to the board could be more precise and directive. The CQSPE is a forum that considers risk at an appropriate level of detail but some of its concerns are not fully represented in the boards record. The CQSPE is large reflecting its wide stakeholder group (19 members) but this size in our view may reduce the body's ability to focus on the pertinent issues it discusses and makes recommendations on. The trust however finds the

current membership and function to work well and currently the board is content with the membership and functionality. There is also a regular update from the MD to each board meeting on mortality.

The current clinical leadership model within the medical faculty has several layers. At department level there is a 'head' of service. This senior consultant reports to the clinical directors and then to the chiefs of either surgery or medicine. The medical director is supported by two deputies. Our overall impression was that the structure was overly complex and required more direct reporting to senior staff when issues arise.

While we received variable views on the relationship between management and clinicians in the ED, and continuing concerns over implementation of new policies and procedures without a more robust discussion, it was recognised by most that times had moved on. The appointment of a new head of department in the ED is acknowledged as a major step forward and one backed by senior clinical as well as managerial staff.

4. What are our recommendations?

Our recommendations and opinion are laid out fully in our report (parts 1&2) and we highlight the main areas only in this summary. We highlight specific areas where care can be improved reasonably quickly and offer advice on how the trust may respond more fully in the long term. We also have recommendations for the wider system where significant changes could improve end of life care*. Although the deaths are attributed to the ED department where certification takes place, the factors contributing to such events are system wide*.
We acknowledge in our final section, below, the trusts response to our findings as well as the concerns expressed by their regulators.

4.1 Recommendations within ED

- **a.** Improve triage and assessment processes through a simpler single point access to the ED, with appropriate senior support. Refining ESI Emergency severity index) criteria to reflect the timeliness of risk.
- **b.** Clarification of the accountability of cases following referral to another department (predominantly physicians) while the patient remains in the department. Audit timeliness of such referrals and response.
- **c.** With ECIST, agree improved flow out of the department with a focus on improving bed availability. Utilising a whole hospital approach escalating to specialist services so ALL staff own the problem.
- **d.** Leadership in the ED; as we visited the trust this was under transition and there was evidence of improved confidence in the newly appointed leadership. This will require ongoing support and development.

e. Sepsis management; implement and continually audit the sepsis pathway and if in doubt 'prescribe'. Activating PGD (patient group directive allowing prompt administration of antibiotics) for sepsis fully.

f. During peak demand and during the periods when consultants are not present but on call, consider the development a digital tele-health service to improve senior decision making within the ED (and if required other departments)

4.2 Trust wide recommendations

4.2.1To support the medical director and director of nursing a trust wide senior role is developed to support early intervention of the deteriorating patient.

4.2.2 Safeguarding; The Trust should review its current policies and make sure all staff are aware of their responsibilities in ensuring safe care of vulnerable patients.

4.2.3 An integrated solution is agreed across the trust enabling integration of the acute floor, incorporating the ED, AMU, frailty pathway and acute medical unit.

4.3 Implications for Trust wide governance

4.3.1 The governance structure which has evolved to deal with current issues in urgent care and mortality needs review/simplifying to deliver a steady state system of analysis and monitoring.

4.3.2. The Trust should decide the type of data it requires to deliver usable Management Information at all levels, up to and including the Board. This standardisation of data will reduce error and misinterpretation

4.3.3. There is a need to continually review the systems of governance reporting issues related to mortality, to ensure they are fit for purpose and responsive. This includes regular review of each committees terms of reference and membership, to support effective governance.

4.4. Recommendations for the wider health community

4.4.1 Urgently review 'end of life' care in the community with an emphasis on reducing unnecessary conveyancing of patients with serious and life ending conditions.

4.4.2; Agree with WMAS/care and nursing homes/ GP's a more effective recording, immediately available to attending clinicians, of do not resuscitate agreements.

4.4.3. In response to national and local STP strategies implement a care closer to home model reducing overall demand in the ED and trust.

5. What has happened since our review?

We completed our review of the 229 cases in October 2018 our last site visits to the ED were in September. We recognise that significant changes were already under way when we completed the interviews and site visits and these were evidenced to us at the time. We have produced a detailed report following our analysis of the 229 cases and in a separate document the concerns we have over the care of eight of those reviewed. The trust has already contacted the families of those affected and will conduct full expert reviews of each case.

We were already aware of the trust's improvement programme within the ED supported by ECIST, AQUA and the longer-term work with NHSI programme with Virginia Mason in improving patient safety. We were also made aware of the increased emphasis on the analysis of mortality in the trust and recently we received additional documentation of the work of the internal clinical governance teams work. This includes:

1. As part of the ED improvement plan, faster access to specialist opinion both for those patients to be discharged as well as admitted. Targets have been set for a 30-minute time to assessment for those at most risk and 4-hrs for those classified of lower risk. A review of patients within the ED reported a decrease in average time to specialist review decreasing from just over 3 hours in September to 30 minutes in early November. The trust also made available details of the consultant physicians rostering supporting these changes.
2. Learning from deaths. The most recent paper to board (November 2018) demonstrates a more comprehensive review of mortality, interpretation of recent changes to coding of mortality data and the learning from specific disease areas of concern. Examples of changes in practice include
    a. Early intervention is sepsis utilising a recently introduced electronic alerting system. Early evidence shows a significant reduction in mortality (by approximately 25%)
    b. Introduction of a cardiac assessment unit to enhance earlier diagnosis on entry into hospital, with monitoring of key diagnostic biochemical markers of all acute admissions to the trust.
3. In response directly to our report and recommendations the trust has carried out a structured judgment review of 50 sequential deaths in the ED. It is important that deaths within the ED receive the same level of scrutiny that occurs elsewhere in the hospital. This development is consistent with that approach.

Conclusions

When we were asked to conduct the review, it is fair to say that the trust was in distress. There had been a series of intensive and critical inspections by the regulator. The focus on the emergency department was warranted as the regulator, on several occasions, had found evidence of poor care resulting in several warnings to the trust. Our analysis of the cases shows a small increase in cases where care fell below good and an increase (7%) in those deemed poor. Avoidable factors in the deaths analysed are rare and most factors are contributory not necessarily causal. That said, they are a signal that care was deteriorating

in the ED and should form the basis of a quality improvement programme. It is important to contextualise and understand, though not excuse, deficiencies in the care of patients. Undoubtedly the ED at Russells Hall is exceptionally busy and has a high number of complex cases. Over half of the deaths occurring in the department could be dealt with (as they are inevitable) within the community and certification should take place there. The additional time required to humanely process deaths within the department detrimentally affects the care of those with recoverable illness.

There are structural but more importantly cultural changes required within the ED to facilitate a safer environment. This should be led professionally by clinicians and our evidence is that these issues are now being addressed. The move to a more active management of patient flow and assessment by specialist clinicians is welcome, but evidence of a sustainable model will need to be monitored and evaluated externally, as well as internally, over the coming months.

The trust has embraced external assistance in improving patient care and safety and its subsequent response to our review has commenced.

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