HSIB

HEALTHCARE SAFETY INVESTIGATION BRANCH

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SUMMARY REPORT

RECOGNISING AND RESPONDING TO CRITICALLY UNWELL PATIENTS

I2017/007

Independent report by the
Healthcare Safety Investigation Branch

May 2019 Edition


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HEALTHCARE SAFETY
INVESTIGATION BRANCH

PROVIDING FEEDBACK AND COMMENT ON HSIB REPORTS

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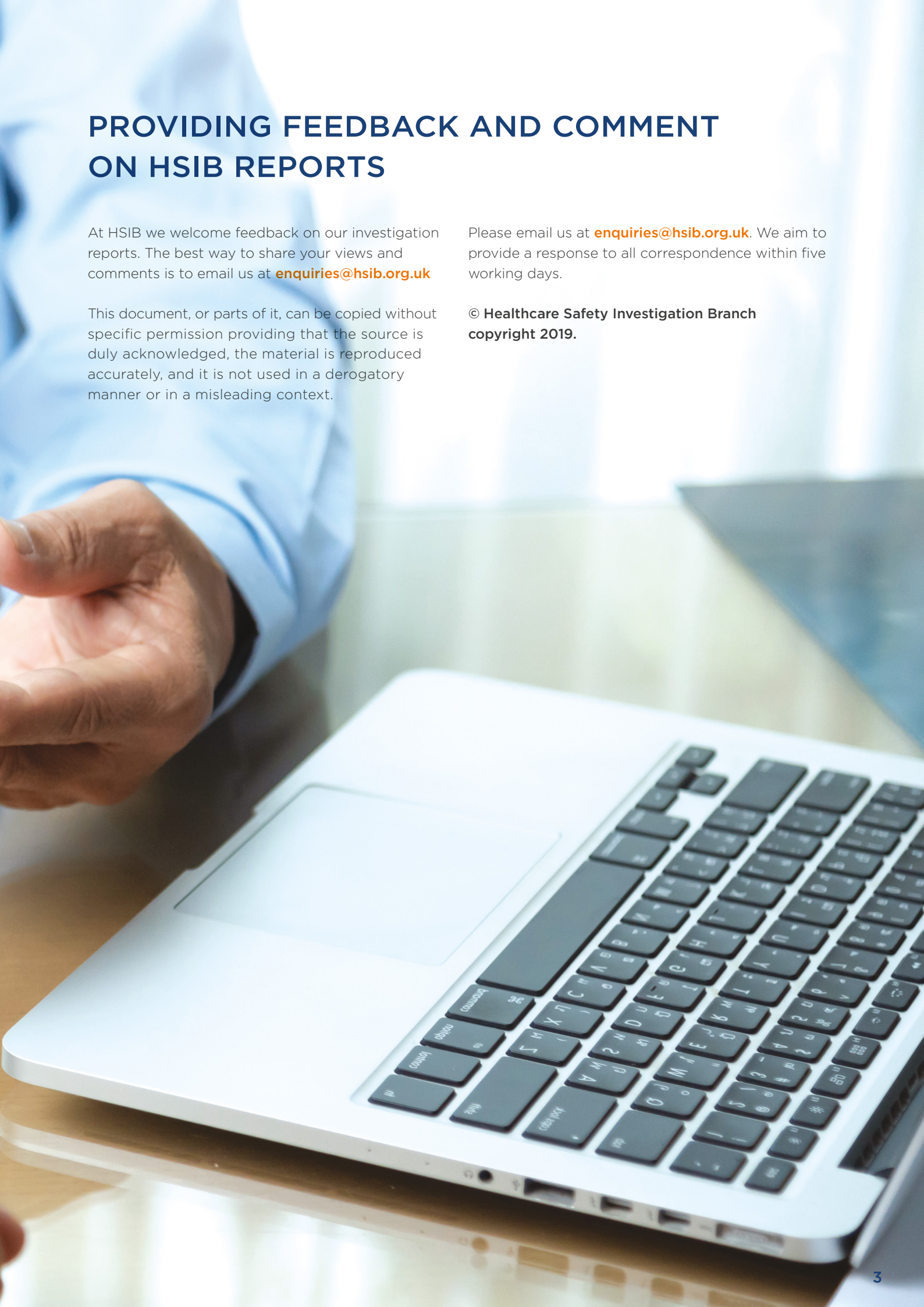

ABOUT HSIB

The Healthcare Safety Investigation Branch (HSIB) conducts independent investigations of patient safety concerns in NHS-funded care across England. Most harm in healthcare results from problems within the systems and processes that determine how care is delivered. Our investigations identify the contributory factors that have led to harm or have the potential to cause harm to patients. The recommendations we make aim to improve healthcare systems and processes in order to reduce risk and improve safety. Our organisation values independence, transparency, objectivity, expertise and learning for improvement. We work closely with patients, families and healthcare staff affected by patient safety incidents, and we never attribute blame or liability to individuals.

OUR INDEPENDENCE

We are funded by the Department of Health and Social Care and sponsored by NHS Improvement, but we operate independently of government and the NHS. In 2018, a draft Bill for establishing the Health Service Safety Investigations Body (HSSIB) was presented to Parliament. Following scrutiny by a joint committee, the government is committed to introducing a revised Bill when parliamentary time allows. The revised Bill, if passed, will establish a new body (HSSIB) with full statutory independence and enshrine its right to conduct national patient safety investigations under protected disclosure. This provision, commonly known as *'safe space'*, enables staff, patients and other participants in a HSSIB investigation to share their experience of a patient safety incident without fear of reprisal. It will not prevent HSSIB from sharing important details with families, regulators or organisations about an incident or to address immediate risks to patient safety. Full information about the draft Bill is available on the Department of Health and Social Care **website**

A NOTE OF ACKNOWLEDGEMENT

We are grateful and give our thanks to the friend of the person whose experience is written about in this report. We would also like to thank the Trust and members of staff who participated in this investigation process and openly shared their perceptions of the incident with us as well as expressing their empathy for those involved.

OUR INVESTIGATIONS

Our team of investigators and analysts have diverse experience working in healthcare and other safety critical industries and are trained in human factors and safety science. We consult widely in England and internationally to ensure that our work is informed by appropriate clinical and other relevant expertise.

We undertake patient safety investigations through two programmes.

NATIONAL INVESTIGATIONS

Our national investigations can encompass any patient safety concern that occurred within NHS-funded care in England after 1 April 2017. We consider the requirement to investigate potential incidents or issues based on wide sources of information including that provided by healthcare organisations and our own research and analysis of NHS patient safety systems.

We decide what to investigate based on the scale of risk and harm, the impact on individuals involved and on public confidence in the healthcare system, as well as the potential for learning to prevent future harm. We welcome information about patient safety concerns from the public, but we do not replace local investigations and cannot investigate on behalf of families, staff, organisations or regulators.

Our investigation reports identify opportunities for relevant organisations with power to make appropriate improvements though:

- safety recommendations made with the specific intention of preventing future, similar events; and
- safety observations with suggested actions for wider learning and improvement.

Our reports also identify actions required during an investigation to immediately improve patient safety. Organisations subject to our safety recommendations are requested to respond to us within 90 days; these responses will be published on our **website**

More information about our national investigations including detailed explanations of our criteria, how we investigate, and how to refer a patient safety concern is available on our website.

MATERNITY INVESTIGATIONS

From 1 April 2018, we became responsible for all patient safety investigations of maternity incidents occurring in the NHS which meet criteria for the Each Baby Counts programme (Royal College of Obstetrics and Gynaecologists, 2015). The purpose of this programme is to achieve rapid learning and improvement in maternity services, and to identify common themes that offer opportunity for system-wide change. For these incidents HSIB's investigation replaces the local investigation, although the trust remains responsible for Duty of Candour and for referring the incident to us. We work closely with parents and families, healthcare staff and organisations during an investigation. Our reports are provided directly to the families involved and to the trust. The Trust is responsible for actioning any safety recommendations we make as a result of these investigations.

On 1 April 2019, we began operating in all trusts. Our longer-term aim is to make safety recommendations to national organisations for system-level improvements in maternity services. These will be based on common themes arising from our trust-level investigations. More information about our maternity investigations is available on our **website**

EXECUTIVE SUMMARY

The reference event

A 58-year-old woman was transported to an Emergency Department (ED) by ambulance with severe abdominal pain, 13 days after she had undergone emergency surgery for a perforated duodenal ulcer. During her stay in the ED, her observations (temperature, blood pressure, pulse, respiration rate, oxygen saturation and levels of response) were recorded regularly. The patient's initial observations in the ambulance and the ED showed a rapid heart rate and low blood pressure.

Whilst in the ED, the patient's blood pressure decreased further. She received intravenous fluid and her blood pressure showed some sign of improvement but remained low. The patient's physiological observations continued to be monitored and, following a review by the surgical registrar, she was admitted to a surgical ward after spending seven hours in the ED.

Approximately two and a half hours after the patient was admitted to the surgical ward, she deteriorated, and the Critical Care Outreach Team (CCOT) was called. She was assessed by the CCOT and other senior medical staff before being transferred to the Intensive Care Unit (ICU). Despite treatment, the patient continued to deteriorate and died a few hours later.

The national investigation

HSIB was notified anonymously about the reference event. There were specific concerns raised relating to the limited recognition and response to the seriousness of the patient's condition. The investigation reviewed the care the patient received in the ED and surgical ward to understand why there had been limited recognition and response to indications that her condition was deteriorating. After gathering additional information and assessing the incident against the HSIB's investigation criteria, a decision was made to progress to a national investigation.

The national investigation reviewed relevant research and safety literature relating to recognition and response to deteriorating patients, engaged with national subject matter advisors and consulted with professional bodies.

The national investigation explored the human factors which may influence recognition and response to a patient who is critically unwell.

It focused on:

- situation awareness and decision making
- patient assessment models for the emergency department
- the number of publications and guidelines available to clinicians and the use of the National Early Warning Score (NEWS).

A number of other issues were identified that have provided some peripheral learning but were not explored further in this investigation.

Findings from the reference event

- There were interrelated and systemic contributory factors that influenced decision making and why the patient's deterioration was not sufficiently recognised or responded to.
- The staffing structure of the ED may not be best for ensuring patients are seen by the right person in an appropriate timeframe.
- Information about the patient was dispersed across a variety of documentation and clinical staff. The design and presentation of this information did not support staff in making a complete and accurate assessment of the patient.
- Staff may rely on tools such as Early Warning Scores (EWS), especially when working in a busy and complex environment. There tended to be a focus on the latest physiological observations and staff could have been falsely reassured when the EWS indicated the patient may be improving.
- The information that was communicated across the patient's care eroded at each stage of the patient's care pathway.
- Escalation of the patient's deterioration was not optimal because of problems with the availability of staff and the way in which the Critical Care Outreach Team was utilised. One of the Trust's escalation

policies also differed to that recommended by the Royal College of Physicians National Early Warning Score (NEWS) guidance. It was found these issues were not unique to the Trust where the reference event occurred.

- There was some ambiguity as to which specialty had clinical responsibility for the patient's care once she was referred to the surgical team.

Findings from the national investigation

- There are a number of factors that can influence situation awareness and thus decision making. Improving decision making and situation awareness is not simple. The system needs to be designed to support information/awareness getting to the places it needs to be.

- There has been no formal evaluation for the usability of NEWS in the various clinical settings into which it has been introduced, particularly in respect to the human factors that influence its use.

- Research suggests that NEWS can place a high demand on medical staff and the current escalation protocols may not be achievable owing to a task versus resource mismatch.

- There are multiple organisations producing publications and guidance on the recognition and response to a patient who is deteriorating. The large number of publications and guidance is likely to add complexity and make it difficult for trusts and staff to manage the *'deteriorating patient'*.

- National policy such as the *'4-hour standard'* (the maximum length of time a patient should be in the ED) may be adversely influencing behaviours with a focus on meeting the performance standards.

HSIB MAKES THE FOLLOWING SAFETY RECOMMENDATIONS

Recommendation 2019/032:
The Royal College of Physicians NEWS advisory group continues to evaluate the implementation and use of NEWS2, including but not limited to:

- The use of NEWS2 in practice, in particular the consistency of recording, the consistency of response, and the communication of patient measurements between healthcare professionals.
- The effectiveness of NEWS2 in identifying a patient's level of acute illness in different care settings and patient groups.
- The presentation of NEWS2 information and how this supports clinicians to identify trends, particularly in electronic records.
- The guidance and training on the use of NEWS2 as part of clinical assessment and patient monitoring.

Recommendation 2019/033:
NHS England/NHS Improvement should expand the remit of the Cross-System Sepsis Programme Board to include physical patient deterioration, involving additional stakeholders as required.

HSIB MAKES THE FOLLOWING SAFETY OBSERVATIONS

Observations:

- NEWS2 is not intended to be a stand-alone tool. Instead, it is intended to be combined with other relevant charts, clinical investigation results and notes together with clinical observations of the patient. There may be benefits to staff being trained in this approach and systems being designed to support bringing relevant information together.
- There may be benefits to including the historical data from NEWS2 graphs and charts, together with other key information, during a patient handover.
- There would be benefits to trusts ensuring they are using the latest version of the NEWS2 observation chart and protocols. Any recommended changes to early warning scores, documentation or use would benefit from being tested in practice before widespread implementation.

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FURTHER INFORMATION

More information about HSIB – including its team, investigations and history – is available at **www.hsib.org.uk**

If you would like to request an investigation then please read our **guidance** before submitting a safety awareness form.

@hsib_org is our Twitter handle. We use this feed to raise awareness of our work and to direct followers to our publications, news and events.

CONTACT US

If you would like a response to a query or concern please contact us via email using **enquiries@hsib.org.uk**. We monitor this inbox during normal office hours - Monday to Fridays (not bank holidays) from 0900hrs to 1700hrs. We aim to respond to enquiries within five working days.

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