REGULATION 28: REPORT TO PREVENT FUTURE DEATHS.

	REGULATION 28 REPORT TO PREVENT FUTURE DEATHS **THIS REPORT IS BEING SENT TO:** • [redacted] – Medical Director Healthcare Quality Improvement Partnership Ltd (HQIP) 27A Harley Place 45 Moorfields London EC2Y 9AE • [redacted] President of the British Thoracic Society 17 Doughty Street, London WC1N 2PL Copied for interest to: • Family members of the deceased • MFT NHS Trust
1	**CORONER** I am: Senior Coroner Nigel Meadows Senior Coroner for Manchester City Area HM Coroner's Court and Office Exchange Floor The Royal Exchange Building Cross Street Manchester M2 7EF
2	**CORONER'S LEGAL POWERS** I make this report under paragraph 7, Schedule 5, of the Coroners and Justice Act 2009 and regulations 28 and 29 of the Coroners (Investigations) Regulations 2013.
3	**INVESTIGATION and INQUEST** On the 30th July 2019 I commenced an investigation into the death of. The investigation concluded on the 15th December 2022. The Narrative Conclusion of the inquest was: The deceased died as a consequence of serious traumatic injuries she sustained in an accidental fall in Pakistan at about 02:30 hours

on the 9 July 2019 which were not all initially diagnosed in combination with other serious comorbid conditions. She was not correctly assessed as being unfit to fly and during her flight back to United Kingdom on 12 July 2019 her condition significantly deteriorated. On arrival she was admitted to hospital in Manchester. Despite ongoing medical management her condition suddenly deteriorated on 25 July, and she died following day. She probably would not have survived even if aspects of her treatment had been different.

Circumstances of the death

1. The deceased suffered from suffered from several serious chronic comorbid conditions. At about 02.30 hours on 9 July 2019 while staying in a property in Lahore, Pakistan when mobilising to go to the toilet she fell from a high bed onto a hard tiled floor and landed heavily. She was taken to the National hospital in Lahore where she was assessed as only having suffered a fractured clavicle. She was not diagnosed with also suffering from several fractured ribs which amounted to flail chest as well as a subdural haematoma. She was discharged from hospital on 10 July 2019 with a recording oxygen saturation level of 88% which should have precluded her from flying without supplemental oxygen being provided. She flew back to Manchester in the United Kingdom on 12 July 2019, but during the flight she suffered from serious cardiac and respiratory distress. On landing she was transferred to an ambulance and immediately taken to Wythenshawe Hospital in Manchester.

2. Shortly after admission she was diagnosed suffering from flail chest and a subdural haemorrhage in addition to a chest infection. She was treated with antibiotics and her usual heart medication was omitted. Her condition steadily improved and on 15 July 2019 she was referred to Huddersfield hospital in Yorkshire in order for her to be transferred for continuing rehabilitation and medical management. A bed was not initially available and on 19 July 2019 she was unable to be moved because her potassium levels high and her kidney function had deteriorated. On 20 July 2019 her condition had deteriorated, and she had developed the degree of fluid overload and was recommenced on a diuretic medication.

3. By 22 July 2019 she was noted to have had fluctuating drowsiness and an element of delirium and having little no oral intake. The administration of oxygen during her admission was appropriate, but on occasions not correctly documented. On the afternoon of 25 July 2019, she suffered a serious deterioration when, despite appropriate medical management and treatment, her condition deteriorated, and she died on 26 July 2019. Different medical treatment would have more than minimally increased the chances of survival, although, on the balance of probabilities, it would not have altered the eventual outcome.

4. The expert respiratory medicine witnesses in the case agreed that it was best practice for target oxygen saturations to be documented and for oxygen to be titrated to achieve these levels but in their experience, this is often poorly done on non-specialist wards and what happened Wythenshawe hospital was not uncommon. It was recognised that was certainly best practice, but the local MFT Trust guidelines are to prescribe oxygen. There was a national problem with oxygen prescribing which had been recognised by audits undertaken by the BTS.

5. There are no NICE guidelines, but the BTS guidance are clear. An audit that took place in 2015 indicated that Wythenshawe hospital was actually doing better than the rest of the country in complying with the guidance. There was a difference between a direction for oxygen being written in the clinical records as opposed to being

recorded on a drug chart. In practical terms it was simply implementing the guidelines at the coalface which was the problem. It was not clear whether a re-audit being undertaken but there was a necessity for wider education of all physicians in the prescribing of oxygen within MFT NHS trust and more widely in the country.

6. Following the last BTS audit MFT took steps to address any patient safety issues that come from not prescribing oxygen and that was through the introduction of oxygen variance forms and there is ongoing programme of education for all doctors as they begin work at MFT. There still appears to be national inconsistency in addition to the use of both paper and electronic records with the added complication of a move towards using electronic records only. Patients are at risk of harm, serious harm, or death as a consequence of over oxygenation or under oxygenation. There was no evidence in the medical literature for the use of Bi level Ventilation for a patient with flail chest.

Important Explanatory Notes:

The BTS is a registered charity and not a governing body. The aim of the BTS audits are to support members to identify and improve standards of care for people with respiratory disease. The request for the BTS to undertake a further review and audit would be costly for this charity to conduct on a national scale.

The BTS may be planning to update their 2017 guideline for oxygen use in adults in healthcare and emergency settings. The Healthcare Quality Improvement Partnership (HQIP), is the arm's length, centrally funded, government body responsible for several national healthcare quality improvement programmes. From a funding, logistics and resources perspective, HQIP is likely to be better placed to consider the feasibility of a national audit programme.

Therefore, and again pragmatically, it may be more appropriate for any national audit to take place following the introduction of the updated guideline, with appropriate funding in place, potentially from HQIP. It would be important for there to be co-ordination between the HQIP and the BTS.

The BTS provides open access to its' audit tools. This allows hospital trusts to conduct recurrent audits for assurance against the agreed standards of care and also compare their data with the national picture as it appeared at the time of the previous audit period. The last BTS National Emergency Oxygen Audit was run in 2015. Consequently, there is an opportunity for HQIP to encourage Trusts to use the BTS audit tools to evaluate its data and performance now, pending a future national audit.

5 **CORONER'S CONCERNS**

The **MATTERS OF CONCERN** are as follows:

1. That the HQIP should consider undertaking in liaison with the BTS a further review and audit in relation to delivering a recurrent national audit of emergency oxygen. This update will also be able to use learning from recent clinical practice (including the Covid pandemic) and the developments in treatment.

	2. Formulate any new guidelines and recommend any necessary changes to try and improve national practice. 3. The HQIP could encourage all NHS Trusts to use the BTS audit tools to evaluate its data and performance now, pending a future national audit. 4. The BTS have already issued guidance for passengers travelling with respiratory conditions; namely, the BTS Clinical Statement on air travel for passengers with respiratory disease (https://thorax.bmj.com/content/77/4/329). However, this guidance does not cover trauma, as in this case. Whether or not guidance would be appropriate to issue to determine whether or not a person was fit to fly from a respiratory perspective in the context of trauma – Consideration should be given to formulating such guidance which can then be circulated more widely including to the airline industry
6	**ACTION SHOULD BE TAKEN** In my opinion action should be taken to prevent future deaths and I believe you and your organisation have the power to take such action.
7	**YOUR RESPONSE** You are under a duty to respond to this report within 56 days of the date of this report, namely by the 1st March 2023. I, the Coroner, may extend the period. Your response must contain details of action taken or proposed to be taken, setting out the timetable for action. Otherwise, you must explain why no action is proposed.
8	**COPIES and PUBLICATION** I have sent a copy of my report to the Chief Coroner and to Interested Persons. I have also sent it to organisations who may find it useful or of interest. I am also under a duty to send the Chief Coroner a copy of your response. The Chief Coroner may publish either or both in a complete or redacted or summary form. He may send a copy of this report to any person who he believes may find it useful or of interest. You may make representations to me, the coroner, at the time of your response, about the release or the publication of your response by the Chief Coroner.
9	**DATE: 22nd December 2022** **Mr Nigel Meadows** HM Senior Coroner Manchester City Area **Signed:**