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HM Coroner
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National Medical Director
NHS England
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11 April 2023

Dear Coroner,

Re: Regulation 28 Report to Prevent Future Deaths – Teegan Marie Barnard who died on 7th October 2019.

Thank you for your Report to Prevent Future Deaths (hereafter "Report") dated 17th January 2023 concerning the death of Teegan Marie Barnard on 7 October 2019. In advance of responding to the specific concerns raised in your Report, I would like to express my deep condolences to Teegan's family and loved ones. NHS England are keen to assure the family and the coroner that the concerns raised about Teegan's care have been listened to and reflected upon.

I am also grateful for the further time granted to respond to your Report, and I apologise for any anguish this delay may have caused Teegan's family or friends. I realise that responses to Coroner Reports can form part of the important process of family and friends coming to terms with what has happened to their loved ones and appreciate this will have been an incredibly difficult time for them.

NHS England have reviewed the response to your Report from University Hospitals Sussex NHS Foundation Trust (hereafter "the Trust") whom we consider are the most appropriate body to respond to the concerns raised. We note that the Trust has identified learning points and strengthened its training for relevant staff members following Teegan's death as well as the ongoing improvement work to their maternity services, implemented through the Maternity Improvement Programme.

Resuscitation algorithm (4 H's & 4 T's)* for PEA cardiac arrest and surgical emphysema

You raised the concern that the resuscitation algorithm of 4 H's (Hypothermia, Hypoxia, Hypovolaemia, Hypo/Hyperkalaemia) and 4 T's (Tension pneumothorax, Toxins, Thrombosis, Tamponade) was not applied adequately following Teegan's cardiac arrest and that there was delay in recognition of surgical emphysema.

The 4 H's & 4 T's algorithm is taught as part of the Advance Life Support (ALS) course, a course run by the Resuscitation Council UK and aimed at those healthcare professionals who need skills in ALS as part of their clinical duties, to include doctors, paramedics and nurses working in acute care areas. All anaesthetists, and all doctors

working in any environment where ALS would be required, to include obstetricians and senior members of the cardiac arrest team in this case, are expected to hold an up-to-date ALS certificate (or equivalent) and be across the latest guidance regarding resuscitation and cardiac arrest. Surgical emphysema is covered as part of this course.

Bilateral pneumothoraces occurring as it did in this case is rare and we note that both the Royal College of Anaesthetists (RCoA) and Association of Anaesthetists has stated that most anaesthetists will never encounter such a situation. NHS England's National Patient Safety Team forms part of the Safe Anaesthesia Liasion Group (SALG), together with the RCoA and the Association of Anaesthetists, who will therefore be sharing the learnings from Teegan's death across its network of relevant organisations. The national Regulation 28 Working Group will also be asking its regional members to share the learnings with their Integrated Care Boards (ICBs) for onward sharing to Trusts across England.

NHS England also consulted with the Resuscitation Council UK as part of its review of your Report. It should be noted that as a result of Teegan's death, the Resuscitation Council reviewed the existing ALS guidance and materials, to include consultation of relevant experts. It was concluded that the ALS course did adequately cover the algorithm as well as cardiac arrest in pregnancy.

Trust investigation and Clinical Governance procedures

With regard to the concerns around the subsequent investigation into Teegan's death, and the fact that there was no local investigation run in parallel to the Healthcare Safety Investigation Branch's (HSIB's) investigation, the NHS England National Patient Safety Team has recently launched a new Patient Safety Incident Response Framework (PSIRF), which 'sets out the NHS's approach to developing and maintaining effective systems and processes for responding to patient safety incidents for the purpose of learning and improving patient safety'.

PSIRF states that "*Where [an HSIB maternity] investigation is undertaken, a separate local patient safety learning response is not required. However, organisations should complete Duty of Candour requirements (ahead of handover to HSIB for further involvement of patients/families in the investigation)*." We note from the Trust's response that they have reviewed and strengthened the process for decision-making around the local investigation of incidents when incidents are referred to HSIB.

Regarding your concerns around there being no temporary removal of the anaesthetic machine used in this case, or the downloading of information from the machine, we welcome RCoA's commitment to update its guidance accordingly, to ensure responsibilities around this are made more explicit. We are also aware that the Care Quality Commission (CQC) will be issuing a response to your Report and will review their response and any recommendations made in due course.

I would also like to provide further assurances on national NHSE work taking place around the Reports to Prevent Future Deaths. All reports received are discussed by the Regulation 28 Working Group, comprising Regional Medical Directors, and other clinical and quality colleagues from across the regions. This ensures that key learnings and insights around preventable deaths are shared across the NHS at both a national and regional level and helps us pay close attention to any emerging trends that may require further review and action.

Thank you for bringing these important patient safety issues to my attention and please do not hesitate to contact me should you need any further information.

Yours sincerely,

National Medical Director