

Ref: KWB/DC/TSC

22 May 2019

**Sunderland Royal Hospital**  
Kayll Road  
Sunderland  
Tyne & Wear  
SR4 7TP***Private & Confidential***Derek Winter DL  
Senior Coroner for the City of Sunderland  
Civic Centre  
Burdon Road  
Sunderland  
SR2 7DN  
[www.ststf.nhs.uk](http://www.ststf.nhs.uk)Dear *Mr Winter*,**Regulation 28 Report to Prevent Future Deaths – Mr Thomas Smith Collings**

I write further to your correspondence dated 15<sup>th</sup> April 2019 regarding your concerns identified during the Inquest into Mr Thomas Smith Collings' death.

As you are aware, the Trust takes all patient deaths extremely seriously and we undertake mortality reviews to establish if lessons can be learned and services improved. In this case, we also completed a comprehensive investigation/Root Cause Analysis with regard to the functioning of Mr Collings' cardiac monitor when he suffered a fatal heart arrhythmia in the coronary care unit (CCU) on 2<sup>nd</sup> August 2018. As part of the learning from this internal investigation, the clinical team identified the need for increasing staff awareness in respect of cardiac monitor alarms sounding for artefact purposes and this was immediately addressed at the time by the department manager. The incident has been discussed at the Directorate Clinical Governance meeting and nursing team meetings, with an emphasis on the requirement for staff to review alarms immediately and attend to the patient in order to undertake a visual check. Additionally, there is now augmented observation of the central monitor console on CCU by nursing staff, aided by an increase in the staffing levels.

The Directorate developed a business case for a new monitoring system for CCU from an alternative supplier. I am pleased to inform you that the Trust approved this business case, the equipment has been purchased and the enabling work for the installation has now commenced. Staff training on the new monitoring equipment has been procured as part of the process and there will be a full and comprehensive training package delivered as part of this changeover. Our estates department is currently installing additional network cabling throughout the unit, so we do not yet have a completion date for the installation of the monitoring system, but we estimate that this will be in the Autumn. Unfortunately, until we have confirmation of when these enabling works will be completed, I am unable to provide you with the definitive timescales for the commencement of this training, as it needs to be organised around the installation date. However, I have provided a copy of the training programme (please see attached).

To summarise the training plan, the company's Clinical Application Specialist (CAS) will be on-site for a total of 4 weeks to provide on-site training and support. The training will commence on the department approximately 2 weeks before the roll out, to allow a high percentage of staff to be trained prior to the go live date. There will be a further 2 weeks support during the implementation and post go live stage. The training programme will incorporate the alarm classifications and the importance of maintenance of the lead attachments to ensure optimal performance of the monitors. The company will also deliver "Train the Trainer" with key individuals to ensure future new starters can be fully trained following this initial period. The CAS will then return to the Trust 3-4 weeks post go live to discuss and amend any requested configuration changes on the monitors. Following this, further visits and training may be requested if required. I trust this provides you with the assurance regarding the provision of refresher training to our staff.

With respect to additional learning arising from the evidence heard at Inquest, I can assure you that the cardiology team are vigilant in reviewing both "advisory", "warning" and "crisis" alarms and attending to the patient immediately to check for any artefact/lead detachment, to ensure optimal monitoring conditions to detect arrhythmias. This will be reinforced in the training for the new monitoring system. There was additional learning arising from the evidence provided by [REDACTED] GE Healthcare and [REDACTED] medical expert. The cardiac monitor in question has multi lead ECG analysis, meaning that it collects data from all four leads to analyse the rhythm utilising the automated inbuilt detection algorithms. When malfunction of Mr. Collings' cardiac monitor was suspected by the clinical team, our electronics department isolated the monitor for inspection and testing and retrieved the electrocardiogram (ECG) waveform data from the device log file. However, in this instance, the data was only printed off from one of the four monitoring leads, which was insufficient for a full review by the manufacturer. In future, our Hospital Biomedical Engineering Manager will clarify with manufacturers exactly what data needs to be obtained from the device log file to allow a full and thorough inspection.

As you will note, the Trust is addressing the shortfalls highlighted during our investigation and the Inquest, in order to prevent future deaths in similar circumstances. Progress of the actions detailed in this letter will be overseen by [REDACTED] our Executive Director of Nursing, Midwifery and Allied Health Professionals, who will also keep me briefed and report to the Trust's Clinical Governance Steering Group.

I trust this information provides assurance to you that the Trust has taken appropriate action to mitigate any future patient safety issues with regard to the monitoring and observation of patients within cardiology.

I would also like to take this opportunity to offer my sincere condolences to Mr Collings' family on behalf of myself and the Trust.

Yours sincerely



**Ken Bremner MBE**  
**Chief Executive**

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