

31st March 2017

Ms Henrietta Hill QC
Sent by email only

Dear Ms Hill QC

Regulation 28 Response following the Inquest touching the death of Mr Robert Entenman

I attach the Regulation 28 Response made in relation to your PFD Report dated 3 February 2017. We have adopted a layout to enable you to cross-refer those areas of concern directed towards London Bridge Hospital ("the Hospital"), with the actions which have since been taken by the Hospital.

You will observe that the signatory to this document is [REDACTED] President of Operations at HCA.

Although your PFD Report was addressed to me as the Chief Executive Officer of the Hospital, I was not in post at the material time that care was given to Mr Entenman, nor when the majority of the steps were implemented at the Hospital to address the concerns. (I was appointed Chief Executive Officer of the Hospital on 1 January 2017.)

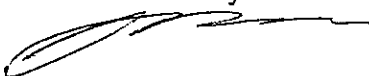
The Chief Executive Officer of the Hospital at the material time was [REDACTED] and who has since been promoted to the position of President of Operations, HCA. It was considered by HCA that it is more appropriate for [REDACTED] to be the signatory to the Regulation 28 Response.

I am advised I am entitled to make representations to you and to the Chief Coroner in relation to whether or not some or the entirety of the Regulation 28 Response should be published.

As your PFD Report appeared on the Chief Coroner's website on 19 February 2017, I would invite the Chief Coroner and you to also publish this Regulation 28 Response. I request this on the basis that your PFD Report identifies concerns, and which concerns are addressed in the Regulation 28 Response. It would appear reasonable that any reader of your PFD Report should be entitled to read of the steps taken by the Hospital in response to those concerns.

If I can provide any further assistance, please do not hesitate to contact me.

Yours sincerely



Janene Madden
Chief Executive Officer

**REGULATION 28 RESPONSE:
RESPONSE OF HCA HEALTHCARE UK ("HCA") AND LONDON BRIDGE HOSPITAL ("LBH") TO
THE REPORT TO PREVENT FUTURE DEATHS DATED 3 FEBRUARY 2017 ("the PFD Report")
MADE PURSUANT TO THE INQUEST TOUCHING THE DEATH OF MR ROBERT ENTENMAN**

SECTION 5: CORONER'S CONCERNS

The PFD Report identifies the Coroner's Concerns arising from the inquest which concluded on 21 October 2016. The Coroner identified three areas of concern which, unless action is taken, risk the occurrence of future deaths. Of those three concerns, the Coroner has identified only one which requires action to be taken by the Chief Executive of LBH and HCA:

Concern numbered (1) indicates that the Nursing and Midwifery Council ("NMC") has the power to take action. **LBH is not required to take action** having already satisfied the Coroner that it is not responsible for addressing this concern.

Concern numbered (2) indicates that Fisher and Paykel (manufacturers of the humidifier) have the power to take action. **LBH is not required to take action** having already satisfied the Coroner that it is not responsible for addressing this concern.

Concern numbered (3) indicates that HCA, LBH, the NMC and the Care Quality Commission ("CQC"), all have the power to take action in relation to the following matters:

3.1 "There were delays in identifying that the endotracheal tube had become blocked between 5.32am and 6.00am on 23 May 2015, and thus replacing it earlier. There may have been further such delays after 6.00am.

3.2 There may have been a delay by nursing staff in providing information about difficulties with the suction catheter to doctors who arrived after the cardiac arrest call was put out."

This Response sets out the actions taken by LBH and HCA to address the two concerns - numbered 3.1 and 3.2 - above.

SECTION 6: ACTION SHOULD BE TAKEN

A. LBH has reviewed Concern numbered 3.1. (above)

This concern is addressed in two parts:

- Action which LBH has taken with the team who cared for Mr Entenman at various material times indicated by the Coroner; and
- Action which LBH has taken to improve systems and processes to ensure that the risk of such events has been minimised in the future.

A.1. Team who cared for Mr Entenman

All individuals (whether they be medical or nursing, Permanent, Bank or Agency staff) who are still employed/engaged by LBH, have reflected upon the concerns raised by the Coroner in the context of their own clinical practice. Further, they have been motivated participants in the improved systems and processes which are described in more detail below (see A.2) and these include Human Factors Training, which is particularly pertinent to the Coroner's concerns.

A.2. Improved Systems and Processes

The following steps have been implemented in relation to equipment, training and human factors relevant to the Coroner's concerns:

1. Capnography:

- a. Continuous capnography is used to monitor all critically ill patients who are intubated (either with an ETT or tracheostomy) and ventilator-dependent.
- b. Clinical staff working in ICU receive training in the interpretation of capnography (prior to commencing work in ICU) via courses (critical care, in-prep, and foundation) and via competency booklets. It is thereafter reinforced through a regular programme of training, implemented through the HCA Learning Academy (see A.2.2.b below).
- c. LBH has purchased two portable End-Tidal CO₂ monitors to augment the availability of capnography during an emergency or Outreach situation. The function of the Outreach service is to provide clinical support and critical skills for the ward areas when a patient becomes unwell. Whereas prior to the purchase of these mobile monitors measuring ETCO₂ during a cardiac arrest outside a critical care area would be unusual, these mobile monitors now extend the areas where capnography may be performed.
- d. Capnography is monitored in all cardiac arrest situations and is part of the mock arrest scenario training. It has been added to the Cardiac Arrest Record Checklist (see B.3 below) as a prompt for the cardiac arrest team's scribe.
- e. LBH has also implemented DOPES (see B.4 below), a system of assessment and diagnosis to be followed by staff in a situation where a suspected "difficult airway" problem arises. DOPES has also been added to the Cardiac Arrest Record Checklist as a prompt for the cardiac arrest team's scribe.

2. Training:

- a. Immediately following the event, LBH engaged an external training company to deliver advanced airway training to medical and nursing staff working on LBH's ICUs. This was prior to the introduction of the more comprehensive advanced airway management training course described in A.2.2.f below.
- b. The HCA Learning Academy, which is responsible for delivering education relevant to clinical processes, knowledge and skills to all HCA facilities, oversees the Learning Management System ("LMS"). LMS is a software system facilitating on-line access from home or work to undertake, complete and store training courses, as well as accommodating book- and classroom-based training for all staff. All data can be updated and stored and LMS provides a robust system for monitoring training records.
- c. Intensive Care nurses, dependent on their grade, have undertaken and continue to undertake training on either the Intermediate Life Support ("ILS") qualification or the Advanced Life Support ("ALS") course. All Outreach nurses must hold the ILS qualification.
- d. Shift leaders and Critical Care Resident Medical Officers ("CCRMOs") have completed the ALS course and which qualification is reviewed annually and renewed every 4 years. Many Outreach nurses also hold the ALS qualification.

- e. To prevent ILS or ALS qualifications from becoming out of date, the new LMS flags to both the nurse/CCRMO and his/her line manager when the qualification requires revalidation. Staff will not be permitted to perform in key roles if these qualifications are out of date.
- f. HCA and the Simulation and Interactive Learning ("SAIL") Centre at Guy's and St Thomas' Foundation Trust have collaborated to deliver additional Intensive Care Airway training for intensive care staff (medical and nursing) working within LBH intensive care environments. This is an ongoing programme of training.
- g. Simulation training aims to develop and enhance key skills in a training environment away from the clinical setting at HCA, whilst remaining in mock clinical areas. The areas addressed include (i) technical skills; (ii) challenging key clinical situations critical to patient safety; (iii) human factors/non-technical skills such as communication, decision making, prioritisation, task allocation, teamwork, patient care and compassion.
- h. Reflective practice for medical and nursing staff continues to be facilitated.
- i. An external training company specialising in healthcare and emergency training delivers an ongoing programme of training including mock arrests and involving the LBH intensive care staff. There is a particular focus on blocked tube scenarios in this training programme.
- j. Consultant Anaesthetists will be undertaking a periodic review of clinical skills of, and Consultant Intensivists will meet on a similar basis with, the CCRMOs for clinical supervision.
- k. All the critical care courses offered by HCA (usually via a leading London university) have been reviewed and the roles of capnography, SBAR and DOPES introduced where they did not exist previously (see B.4 below).
- l. LBH will offer its RMOs rotational work in the operating theatres. This is for RMOs to receive regular updates and input from Consultant Anaesthetists on airway skills.

3. Patient Safety Checklists:

- a. A picture intubation checklist has been developed and is used in all intubations of critically ill patients.
- b. An emergency induction checklist is being introduced. This has been agreed by HCA's Critical Care Delivery Group for implementation across all of HCA's operations.
- c. The Cardiac Arrest Record Checklist has been revised to include prompts for capnography and DOPES (see B. 3 below).

B. LBH has reviewed Concern numbered 3.2. (above)

This concern has been addressed by communication during an arrest being reviewed and improved by LBH having implemented the steps described below.

B.1. A New Airway Management Process has been introduced:

This consists of a 5 step process for patients with an artificial airway in situ. It introduces a "Red, Amber, Green" (or RAG) scoring system (see below).

- a. On admission to ICU, either the Consultant Anaesthetist hands over to the CCRMO (if the patient has arrived from Theatre) or the CCRMO establishes airway facts.
- b. The admitting primary nurse/Nurse in Charge then facilitates an airway discussion with the CCRMO and Consultant Intensivist.
- c. The patient's airway status is established as "Green", "Amber" or "Red". Green (equates to intubation grade 1-2), Amber (equates to intubation grade of 2 if a bougie is used) and Red (equates to an intubation grade of 3 or more). In patients colour-scored Amber or Red, a bespoke Airway Plan is then completed.
- d. The Admitting Nurse/Nurse In Charge then places the appropriate "Airway" sign at the patient's bedside which clearly indicates the patient's airway status.
- e. The Airway Plan is easily accessible at the patient's bedside. The Airway Plan also forms part of the shift handover (see B.2 below) and remains in the patient's electronic medical records.

B.2. LBH Resuscitation Team: Safety Briefing Handover

- a. Patients with potentially high risk airways are identified and discussed at the Safety Briefing Handover to ensure that they are clearly identifiable to those caring for them.
- b. The Safety Briefing Handover is undertaken by the cardiac arrest teams at 9am and 9pm every day.
- c. Roles are allocated to the team members during the Safety Briefing Handover to ensure that in the event of a cardiac arrest, everyone can assume their roles immediately.
- d. Specific questions are considered including (i) whether any patients have potentially difficult airways/intubation grades, if so who/why/what grade, (ii) have there been any reintubations or readmissions, if so who/where? (iii) whether there have been any extubations or de-cannulations planned, if so who?
- e. Two documents are produced during the Safety Briefing Handover as follows:
 - i. The Safety Briefing Form (which remains with the Critical Care Shift Leader); and
 - ii. The Cardiac Arrest Allocation Sheet identifying the specific roles of individuals in the event of an arrest. This remains

with the Duty Manager and is part of the Duty Manager's log.

B.3. Cardiac Arrest Management

In the event of a cardiac arrest:

- a. The Cardiac Arrest Record Checklist is completed by the scribe (this is generally the Duty Manager) who will prompt the cardiac arrest team on capnography, SBAR and DOPES if necessary during the arrest.
- b. During the Cardiac Arrest Debrief, which takes place after any arrest, a further document is completed - the Cardiac Arrest Debrief Record. The Cardiac Arrest Debrief Record is audited and reviewed by the Resuscitation and Training Teams. This is stored on the cardiac arrest trolley.

B.4. Handover Techniques in emergency situations

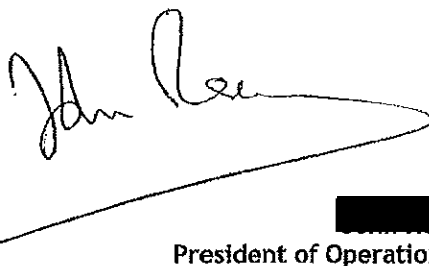
LBH has adopted the follow strategies.

- **SBAR (Situation, Background, Assessment, Recommendation)**
 - a. LBH has highlighted the importance of early verbal communication and escalation using the SBAR system of communication in real time.
 - b. The SBAR technique is known to be the best practice approach for standardising and structuring critical information-sharing between care givers.
 - c. SBAR forms part of the National Resuscitation Training and is included in ILS training annually and ALS training every 4 years.
- **DOPES**
 - a. DOPES is a mnemonic used to identify the potential cause of a suspected airway difficulty in an arrest situation:
 - i. Displacement of tube,
 - ii. Obstruction of tube,
 - iii. Pneumothorax,
 - iv. Equipment failure,
 - v. Stacked breaths.
 - b. It is the first step which is considered following the SBAR handover of a potential airway issue.

- c. It has been adopted by LBH as part of its improvement in assessments and communications and has been added to the ILS and ALS courses, and to the Cardiac Arrest Record Checklist.

B.5. Human Factors Training

- a. Human factors training is the scientific discipline concerned with the understanding of interactions between humans and with elements of a system of work. Unfortunately even the most highly trained and motivated professionals will still make mistakes. However, with a suitable level of understanding of human factors and appropriate training, such errors can be extinguished or mitigated against by restricting the effects of such an error.
- b. Accordingly, in July 2015, LBH introduced Human Factors Training as part of the curriculum to improve and develop situational awareness and which is open to all levels of staff to attend. Records of attendance are maintained in LMS (see A.2.2.b. above).



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President of Operations,
HCA
31 March 2017