REGULATION 28: REPORT TO PREVENT FUTURE DEATHS

	REGULATION 28 REPORT TO PREVENT FUTURE DEATHS **THIS REPORT IS BEING SENT TO:** **The British Obesity and Metabolic Surgery Society**
1	**CORONER** I am HENRIETTA HILL QC, Assistant Coroner, for the coroner area of Inner South District of Greater London.
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** KATHRYN BULL, then aged 61 years, died on 4 December 2014. An investigation into her death, and then an inquest was opened. The inquest into Mrs Bull's death was resumed, and concluded, by myself on 27 April 2016. The medical cause of Mrs Bull's death was: 1.a Multi-organ failure; 1.b Hyperammonaemia syndrome; 1.c Morbid obesity and gastric bypass surgery. The conclusion as to the cause of death was a narrative one to the effect that Mrs Bull died as a result of an extremely rare complication of gastric bypass surgery.
4	**CIRCUMSTANCES OF THE DEATH** The circumstances of the death are as follows: (1) Mrs Bull was morbidly obese. On medical advice she had had a gastric bypass operation on 19 January 2014. (2) Her immediate post-operative recovery was good and she began a liquid diet. (3) However she gradually found it hard to tolerate the solid food diet that she was advised to follow and often only felt able to eat 2 meals a day not 3. (4) She complained of dizziness, lethargy, vomiting and 'blacking out'. These are all unremarkable symptoms of gastric bypass surgery and so did not trigger any concerns in the team monitoring her follow up from the surgery. (5) By October 2014 she was rarely leaving the house. (6) On 19 November 2014 she fell at home and was admitted to Lewisham and Greenwich Hospital. (7) The hospital staff were unsure of the cause of her illness but suspected some form of endocrine collapse or failure secondary to prolonged malnutrition and deficiency in trace elements. (8) Her conscious state fluctuated. (9) By 26 November 2014 her ammonia level had risen to 226 µmol/L (where a level of 112 µmol/L could lead to a deranged cerebral state). (10) She became less conscious and required intubation. (11) She deteroriated further and suffered a cardiac arrest on 4 December 2014, from which she could not be resuscitated. She was pronounced dead at 3.30 pm that day.

	CORONER'S CONCERNS During the course of the inquest the evidence revealed matters giving rise to concern. In my opinion there is a risk that future deaths will occur unless action is taken. In the circumstances it is my statutory duty to report to you. The **MATTERS OF CONCERN** are that: (1) I accepted the evidence from [redacted] and [redacted] to the effect that the medical cause of Mrs Bull's death was multi-organ failure, caused by hyperammonaemia syndrome, which on the balance of probabilities had been caused her morbid obsesity and gastric bypass surgery. (2) The pathologists, [redacted] (the gastric bypass consultant who performed the surgery on Mrs Bull) and [redacted] (the consultant intensivist who treated her in hospital) confirmed that hyperammonaemia syndrome has been identified as an adverse consequence of gastric bypass surgery. (3) However this is extremely rare: there appear to have been only 25 or so reported cases worldwide[1]. Very little appears to be known about the condition and so the symptoms are not well understood.
6	**ACTION SHOULD BE TAKEN** In my opinion action should be taken to prevent future deaths and I believe your organisation has 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 11 July 2016. 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 the following Interested Person, namely the family of Mrs Bull. 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	**Signed ...Henrietta Hill QC...** **Assistant Coroner**

[1] See, for example, the cases reported in Fenves et al, *Fatal Hyperammonaemic Encephalopathy after Gastric Bypass Surgery* in The American Journal of Medicine, Volume 121, No. 1, January 2008 and Fenves et al, *Hyperammonaemic Syndrome after Roux-En-Y Gastric Bypass* in Obesity, Volume 23, No. 4, April 2015