	REGULATION 28 REPORT TO PREVENT FUTURE DEATHS **THIS REPORT IS BEING SENT TO** **1. [redacted], Chief Executive, National Institute for Health & Care Excellence**
1	**CORONER** I am Andrew Cox, the Senior Coroner for the coroner area of Cornwall and the Isles of Scilly.
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 14/1/22, I concluded an inquest into the death of Coco Bradford, a 6-year-old girl who died in Bristol Royal Hospital for Children on 31/7/17. . The medical cause of death was recorded as: 1a) Multiple organ failure 1b) E-coli 0157 associated Haemolytic Uraemic Syndrome 1c) II) I recorded a Narrative Conclusion that Coco died from natural causes, in particular, a severe form of haemolytic uraemic syndrome, a known but rare complication of an e-coli 0157 bacterial infection.
4	**CIRCUMSTANCES OF THE DEATH** Coco was a 6-year-old girl with an established diagnosis of autism. On 25/7/17, she presented to the Emergency Department at Royal Cornwall Hospital with diarrhoea and vomiting. It was suspected she had gastroenteritis. She was treated and discharged with standard advice to return if her condition deteriorated. On 26/7/17, she re-presented more unwell. She was admitted with a working diagnosis of bacterial gastroenteritis and, as she had features of shock, she was subsequently given several boluses of IV fluids. Her condition improved temporarily after each bolus, but the improvements were not sustained and over the course of 27/7/17 she progressively deteriorated. Haemolytic uraemic syndrome (HUS) was suspected and confirmed on blood results later that night. There was concern she also had a concomitant sepsis, but this was not demonstrated on blood cultures only reported after her transfer to Bristol. She was transferred to the Intensive Care Unit on the morning of 28/7/17. After resuscitation and stabilisation, she was transferred to the paediatric intensive care unit in Bristol. Despite further treatment, she continued to deteriorate and died at Bristol Royal Hospital for Children on 31/7/2017.
5	**CORONER'S CONCERNS** During the course of the inquest the evidence revealed two 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 as follows. – 1) In April 2009, NICE published CG 84 on Diarrhoea and Vomiting caused by gastroenteritis in Under 5s and management. Paragraph 1.3.3 deals with IV fluid management for patients presenting with shock. The guidance suggests rehydration with rapid IV infusion at 20mls/kg. The guidance is now a little dated and it is at odds with the Resuscitation Council UK Guidelines issued in 2021 which provide that for children and infants presenting with shock, fluid should be given in boluses of 10mls/kg – there is an emphasis on smaller bolus volumes with careful re-assessment after each bolus to enable early identification of signs and symptoms of fluid overload. This was particularly relevant in Coco's treatment where there was concern she may develop HUS with associated compromise of kidney function. As there appears now to be a move towards smaller boluses of fluid with more frequent review, it may be that you will also feel it appropriate to reconsider when to escalate care to colleagues in intensive care i.e. whether it should still be after two boluses or after a particular total amount of fluid. 2) A second issue that came out of Coco's inquest was the clinical conundrum of how to treat a child with bacterial (e coli 0157) gastroenteritis who is suspected of having a concomitant sepsis. The dilemma is that the administration of antibiotics may precipitate or worsen HUS and, if the child is subsequently found not to have sepsis, may inadvertently cause harm. It may be that you will feel that guidance on how to weigh the balance of risk and who to involve in the decision-making process would be of assistance to clinicians generally.
6	**ACTION SHOULD BE TAKEN** In my opinion action should be taken to prevent future deaths and I believe you [AND/OR 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 15/3/22. 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 Persons: [redacted]; Royal Cornwall Hospital and its clinicians; University Hospital of Bristol and its clinicians. 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] 18.1.22** **[SIGNED BY CORONER]**