IN THE SURREY CORONER'S COURT
IN THE MATTER OF:

The Inquest Touching the Death of Master Yo Li
A Regulation 28 Report – Action to Prevent Future Deaths

1	**THIS REPORT IS BEING SENT TO:** [redacted] Chief Executive Officer NHS Improvement Skipton House 80 London Road London SE1 6LH [redacted] Chief Executive British Association of Perinatal Medicine (BAPM) 5-11 Theobalds Road London WC1X 8SH
2	**CORONER** Miss Anna Crawford, HM Assistant Coroner for Surrey
3	**CORONER'S LEGAL POWERS** I make this report under paragraph 7(1) of Schedule 5 to The Coroners and Justice Act 2009.

4	**INQUEST** The inquest into the death of **Master Yo Li** was opened on 2 April 2019. It was resumed on 24 September 2020 and the conclusion was handed down on 6 October 2020. The medical cause of Master Li's death was: 1a. Total Parenteral Nutrition (TPN) Peritonitis 1b. Total Parenteral Nutrition (TPN) Extravasation 2. Extreme Prematurity The inquest concluded with a narrative conclusion which is set out below.
5	**CIRCUMSTANCES OF THE DEATH** Yo Li was born extremely prematurely at 09:46 on 11 January 2019 at St. Peter's Hospital. Immediately following his birth he did not make any respiratory effort and had to be resuscitated before being transferred to the Neonatal Intensive Care Unit at the hospital where he was supported by way of mechanical ventilation. At 16:00 on 11 January 2019 an Umbilical Venous Catheter (UVC) was inserted in order to provide Yo Li with Total Parenteral Nutrition (TPN), as well as medication. However, the UVC was mal-positioned within Yo Li's liver tissue, resulting in TPN Extravasation, which is a rare but known complication of the use of UVCs, and Yo Li's s death on 15 January 2019. The clinical team caring for Yo Li did not appreciate that the UVC had been mal-positioned and therefore omitted to remove it on 11 and 12 January 2019. If it had removed it on either of those dates Yo Li would have survived.

6	**CORONER'S CONCERNS** The Coroner's concerns are as follows: The court heard evidence that following several deaths due to central venous catheter extravasation the British Association of Perinatal Medicine (BAPM) issued guidance entitled the *'Use of Central Venous Catheters in Neonates – A Framework for Practice'* in December 2015 and updated in August 2018. The guidance sets out a number of risk factors for mal-positioned UVCs. The court heard, however, that the BAPM guidance does not identify one key risk factor for mal-positioned UVCs – namely that there is a risk that it is mal-positioned when it is pointing towards the left side of the base of the heart, as it was in Master Li's case, despite this being a recognised risk in the academic literature on this issue. The court heard evidence that the two clinicians involved in the placement of Master Li's UVC were not familiar with the updated BAPM guidance. The court also heard that the St. Peter's Hospital internal guidance on the use of UVCs was not fully compliant with the updated BAPM guidance at the time of Master Li's death, albeit they have since introduced comprehensive internal guidance on this issue. The court heard that there is no NICE guidance on the use of UVCs and - given that BAPM is a voluntary professional organisation - there is no requirement upon NHS Trusts to ensure that their clinicians are familiar with the BAPM guidance or to ensure that their internal policies and procedures are in accordance with it. The **MATTER OF CONCERN** is: 1. The BAPM guidance on *'Use of Central Venous Catheters in Neonates – A Framework for Practice'* does not identify a key risk factor for a mal-positioned UVC. Consideration ought to be given by BAPM to updating the guidance to include reference to this risk factor. 2. There is no NICE guidance on the use of UVCs and there is no requirement on NHS Trusts to ensure that their clinicians are familiar with the BAPM guidance or to ensure that their internal policies and procedures are in accordance with it. Consideration ought to be given by NHSI to introducing some NICE guidance to cover this issue.

7	**ACTION SHOULD BE TAKEN** In my opinion action should be taken to prevent future deaths and I believe that the people listed in paragraph one above have the power to take such action.
8	**YOUR RESPONSE** You are under a duty to respond to this report within 56 days of its date; I may extend that period on request. Your response must contain details of action taken or proposed to be taken, setting out the timetable for such action. Otherwise you must explain why no action is proposed.
9	**COPIES** I have sent a copy of this report to the following: 1. Chief Coroner 2. Master Li's family 3. Ashford and St. Peter's Hospitals NHS Foundation Trust
10	**Signed:** **Anna Crawford** **H.M Assistant Coroner for Surrey** **Dated this 19th day of November 2020**