Penelope Schofield
Her Majesty's Senior Coroner for West Sussex, Brighton and Hove
Parkside Chart Way,
Horsham
RH12 1XH

15 July 2024

Dear Ms Schofield,

Re: Baby Orlando Nova Davis - deceased
Your ref: 02182-2021

Thank you for your Regulation 28 Report to Prevent Future deaths following the inquest into the death of Baby Orlando Nova Davis dated 26 April 2024.

The loss of a baby is a devastating tragedy for parents, the wider family, and healthcare professionals involved. We would like to begin by extending our deepest and heartfelt condolences to Orlando's family for their profound loss.

This response has been developed following input from members of the RCOG Patient Safety Committee and Senior Officers of the College.

We recognise and respect the narrative conclusion from the inquest that Orlando died of irreversible brain injury when his mother suffered a seizure having developed hyponatremia during her pregnancy.

We also recognise the matters of concern as outlined in your letter as follows, "*in particular that the midwives (in the community and in the hospital, who had cared for Orlando's mother) were completely unaware of this potential condition developing in birthing women. In this case due to Orlando developing a tachycardia during labour, Orlando's mother was actively encouraged to take in more fluid yet there was no accurate record kept of either input or output of fluid. Again when in hospital further fluids were given intravenously with no recognition of any potential risk of hyponatremia developing by the midwives or the Doctor on duty*."

The Royal College of Obstetricians and Gynaecologists (RCOG) plays a vital role in supporting maternity services through its educational initiatives. This encompasses developing curricula, elevating care standards through clinical guidance, assisting in career advancement through examinations, coordinating professional development initiatives and events, and offering support services to its members. Our commitment lies in improving maternity safety, working alongside partners such as Maternity and Newborn Safety

Investigation (MNSI), NHS England, the Royal College of Midwives, National Institute of Clinical Excellence (NICE), and policymakers to realise this objective.

Training in the assessment of maternal and fetal wellbeing is a core component of the RCOG curriculum and is a key component of the MRCOG examinations that all obstetrics and gynaecology trainees must pass before achieving their Certificate of Completion of Training (CCT) in obstetrics and gynaecology and entry to the specialist register. Evidence of undertaking training to demonstrate fetal monitoring interpretation skills is also a requirement of all O&G trainees to ensure they have the basic understanding of fetal monitoring principles. RCOG does not have independent guidelines for intrapartum care and fetal monitoring and recommends use of NICE guidance[1, 2] on this topic.

NICE guideline[1] *(NG229): Fetal monitoring in labour* states in point 1.5.11 *that "if there are any concerns about the baby's wellbeing, be aware of the possible underlying causes and start 1 or more of the conservative measures based on an assessment of the most likely cause(s) and* advises *do not offer intravenous fluids to treat fetal heart rate abnormalities unless the woman is hypotensive or has signs of sepsis".*

NICE guideline[2] *(NG235): Intrapartum care* alludes to hydration in labour in 1.8.17 by advice to inform the woman that she can drink during labour when she is thirsty, but there is no benefit to drinking more than normal. It does suggest (1.8.23) to review bladder care for women at least every 4 hours. This should include fluid balance monitoring if bladder sensation is abnormal or absent, if there is an inability to pass urine, or the woman is receiving intravenous fluids (including oxytocin).

The Obstetric Anaesthesia Association has a Quick Reference Handbook for Obstetric Emergencies[3], which addresses severe and non-severe hyponatraemia (2-9a and 2-9b) management plans, including signs, drugs and critical changes. However, there is a need for increased awareness amongst health care professionals in maternity and midwifery around accurate fluid balance monitoring and an earlier detection of hyponatremia in labour and postnatal period. As there is little known about hyponatraemia in pregnancy, the UK Obstetric Surveillance System[4] (UKOSS) which is a joint initiative between the National Perinatal Epidemiology Unit and the Royal College of Obstetricians and Gynaecologists, has run a study to determine the incidence, risk factors and maternal/neonatal outcomes of peripartum hyponatraemia in obstetric patients in the UK. The results are not yet available.

The Regulation and Quality Improvement Authority has also published a Guideline for the Prevention, Diagnosis and Management of Hyponatraemia in Labour and the Immediate Postpartum Period. (2017)[5]

The RCOG is committed to improving the standard of care provided for women by working collaboratively with all stakeholders and in response to this matter, the RCOG will approach NICE to suggest an addendum to their Intrapartum care guideline: NG235 along the following lines:

"Every woman in labour faces a heightened risk of hyponatremia, characterized by blood serum sodium levels below 130 mmol/L, particularly dilutional hyponatremia, also known as water intoxication. Long labour, excessive water intake or intravenous fluid administration and oxytocin use in labour can increase the risk of hyponatremia. Some of the early signs include headache, anorexia, nausea, lethargy, and apathy progressing to disorientation, agitation, seizures, depressed reflexes, coma, respiratory arrest and noncardiogenic pulmonary oedema.

The occurrence of significant hyponatremia can be prevented by closely monitoring oral and intravenous fluid input and output, and promptly addressing positive fluid balance. Fluid balance charts should be used alongside the partograms in all low risk and high-risk women. The neonatal team should be informed about infants born to mothers or parents with hyponatremia, and consideration should be given to performing paired cord blood sampling."

In terms of actions to be taken, copies and publications, the RCOG would like to suggest that the Royal College of Midwives is also sighted on this concern.

I hope this is a helpful response in this matter.

Yours sincerely,

CEO Royal College of Obstetricians and Gynaecologists

References:

1. NICE guideline [NG229]: Fetal monitoring in labour. Published: 14 December 2022

2. NICE guideline [NG235]: Intrapartum care. Published: 29 September 2023

3. The Obstetric Anaesthesia Association- Quick Reference Handbook for Obstetric Emergencies

4. UK Obstetric Surveillance System (UKOSS) study Peripartum Hyponatraemia in Pregnancy

5. RQIA (Regulation and Quality Improvement Authority), Guideline for the Prevention, Diagnosis and Management of Hyponatraemia in Labour and the Immediate Postpartum Period.

6. NHS Resolution, Case story -Understanding the risk of maternal and neonatal hyponatraemia