

*Paediatrician's case for Dr. Talwar's report.*

## Reasons for concerns regarding a possible criminal cause for increased neonatal mortality at the Countess of Chester Hospital NHS Foundation Trust, June 2015 – July 2016

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### Summary

The historical annual number of deaths on the neonatal unit at the hospital has been between 1 and 3. From June 2015 there were 13 deaths in the 13 months. The probability of this increase in mortality occurring by chance alone is very low. Many of the babies who died were born at gestations where death is statistically very unlikely (Appendix 1).

Of the babies who died, most deteriorated unexpectedly without explanation at the time or subsequently. It is very unusual not to see any clinical evidence of a baby becoming unwell e.g. you might expect to see their heart beating faster or the level of oxygen in their blood changing. In some of these cases there was no recovery to adequate resuscitation measures. For this to occur in such a large number of babies is highly unusual and could be considered as suspicious.

There is an association with a member of staff who was present during the majority of instances when the babies unexpectedly deteriorated. When this member of staff was put onto day shifts for 3 months, no sudden collapses occurred during the night. Previous to this change in her work pattern, in 6 out of 9 deaths, the arrests occurred between 0000 and 0400. When this member of staff was no longer working on the unit (July 2016-present), there have been no neonatal deaths on the unit and no unexpected or unexplained sudden deteriorations. This member of staff was present on the unit during the deterioration of the babies who died

Child A, Child B, Child C, Child D, Child E, Child F, Child G, Child H, Child I, Child J, Child K, Child L, Child M, Child N, Child O, Child P

*Explained (4 cases)  
to me (1 case)*

The gestation at birth of the babies who died was between 27 weeks and 40 weeks. 6 babies were >32 weeks gestation. The redesignation of the unit from July 2016 (only permitted to

13 (4 cases) 8 (8 cases)

care for babies >32 weeks gestation) cannot therefore be the only reason why there have been no deaths or sudden unexplained deteriorations of babies on the unit since July 2016.

An external neonatologist from London has identified 4 babies [redacted] and [redacted] who require further forensic review. Further to her report, a consensus between 3 CoCH paediatricians and an external neonatologist from the Liverpool Women's Hospital (LWH) have identified a further 4 babies [redacted] and [redacted] for whom the cause of death is still unexplained.

An unexplained rash was observed for at least 3 babies. This was initially thought to be due to infection by the clinical teams. However, the rashes resolved spontaneously despite the babies being very ill. This is highly unusual and may indicate a possible unnatural cause of death.

The increase in neonatal mortality did not coincide with any significant changes in acuity or staffing levels in 2015 and 2016. Nursing staffing in Chester NNU was above the national average. The percentage of shifts staffed to BAPM standards was higher than other LNUs in the network and higher than the national average. High dependency and intensive care days did not change appreciably in 2015 and 2016 compared to previous years.

In addition to the babies who died, there were also a significant number of babies who suffered an unexpected collapse or deterioration. The cause for the deteriorations is unknown and the member of staff mentioned above was present on the Neonatal Unit (NNU) for the majority of these cases.

The investigations undertaken by the Trust to date do not appear to have included a comprehensive analysis of staffing at the time of all the collapses and deaths. Senior medical staff, trainee doctors and nursing staff involved with the cases listed below have not been interviewed in relation to the care given around the time of the events listed below. The babies who were transferred from the unit and subsequently died and the babies who collapsed unexpectedly and survived do not seem to have been adequately investigated by the Trust to date. In addition to the concerns listed below, some clinical staff (consultants and trainee doctors) had specific concerns regarding aspects of care of some of these babies but have not had an opportunity to share these concerns with an investigative team.

In summary:

- The number of neonatal deaths in this time period is highly unusual.
- The number of unexpected and unexplained collapses is highly unusual.
- Cause of death is still uncertain for 8 babies.
- Many of the babies who died did not respond to adequate resuscitation as would normally be expected.

- One member of staff has been present during the collapse and/or deaths of an unusually high proportion of the babies involved. The likelihood of this occurring by chance alone is very low.
- Investigations and reviews to date have not identified any other potential cause for the increased mortality or been able to exclude an unnatural cause of the deaths and collapses.

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## Mortality cases

### Child A

31 week gestation twin born in good condition. Sudden unexpected arrest on day **PD** PM and inquest failed to identify cause of death.

External London neonatologist has recommended further forensic review, yet to be undertaken.

Consensus of CoCH paediatricians and external Liverpool neonatologist that the cause of sudden deterioration and the cause of death are still unexplained.

### Child C

30 week gestation baby, birth weight 800g. Died on day **PD** of life despite stable observations 24 hours prior to deterioration – clinically this death would not have been anticipated. Primary cause of death given on PM as widespread hypoxic damage to heart. However, this was likely to have been caused following the decision to withdraw intensive care. As part of the dying process this baby had several hours of very slow heart rate and occasional respiratory gasps. During this time the heart would not have received adequate oxygen and therefore caused the changes seen at PM. The PM finding of hypoxic heart damage does not explain his sudden deterioration following normal observations beforehand.

Consensus of CoCH paediatricians and external Liverpool neonatologist that the cause of sudden deterioration and the cause of death are still unexplained.

### Child D

37 week gestation baby admitted to NNU at **PD** of age with congenital pneumonia. Subsequently she improved clinically. On Day **PD** of life she became mottled and developed dark brown/black tracking lesions across her trunk. 2 "bruises" noted on abdomen thought at the time to represent infection but as the baby improved the areas of discolouration completely disappeared. Areas of discolouration then reappeared prior to sudden deterioration. No response to resuscitation efforts. Awaiting an inquest. PM states primary cause of death is pneumonia with acute lung injury. However, the baby was on CPAP and