Oxford Academic Health Science Network

Oxford AHSN
Annual Partnership Council
17/06/2015

The Maternity Network

Lawrence Impey

Another (b------) network?

Instagram

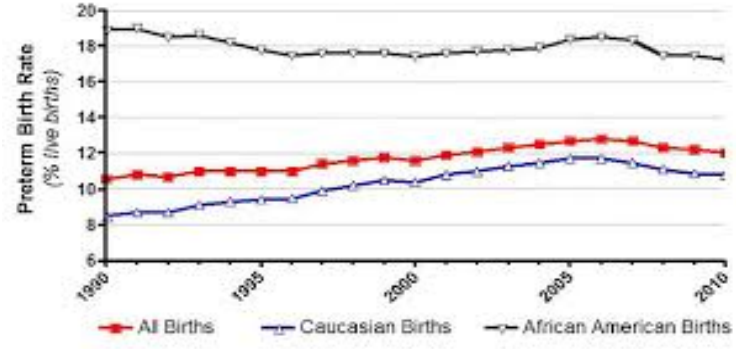
Specialisation is centralised

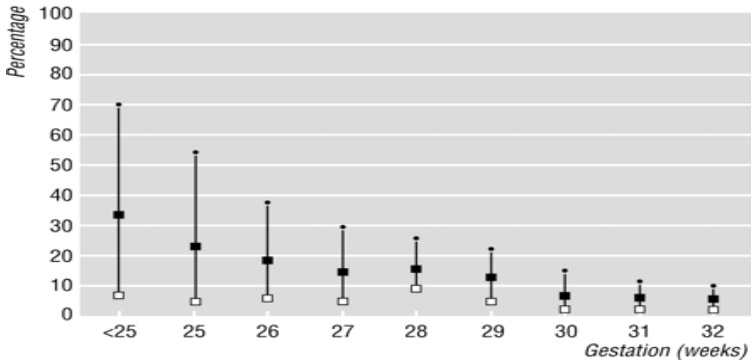
swindon

Maternity Network

1. Units to work together- same, best practice, adjusted to resources and skill mix of units
2. Consistency for training, rotating doctors
3. A proper ODN for high risk/ rare problems
4. Units to collect, compare, pool data
5. Collaboration with research (numbers)
6. Introduction of innovation (numbers)

Preterm Delivery





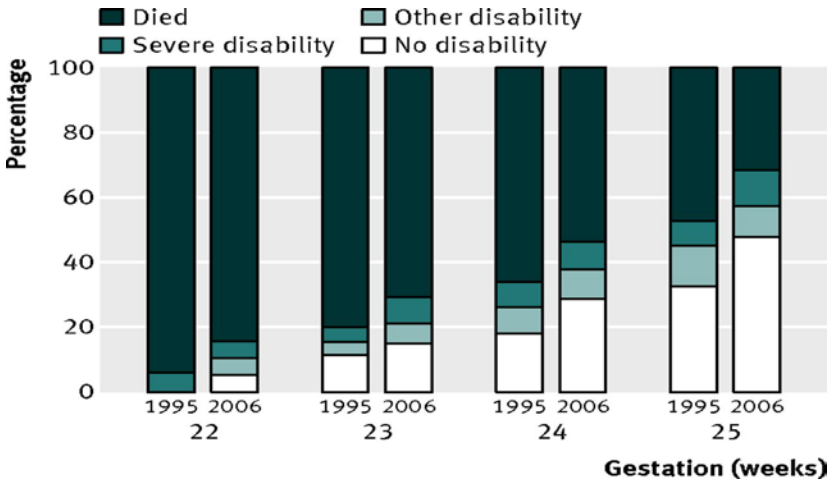


Figure 17

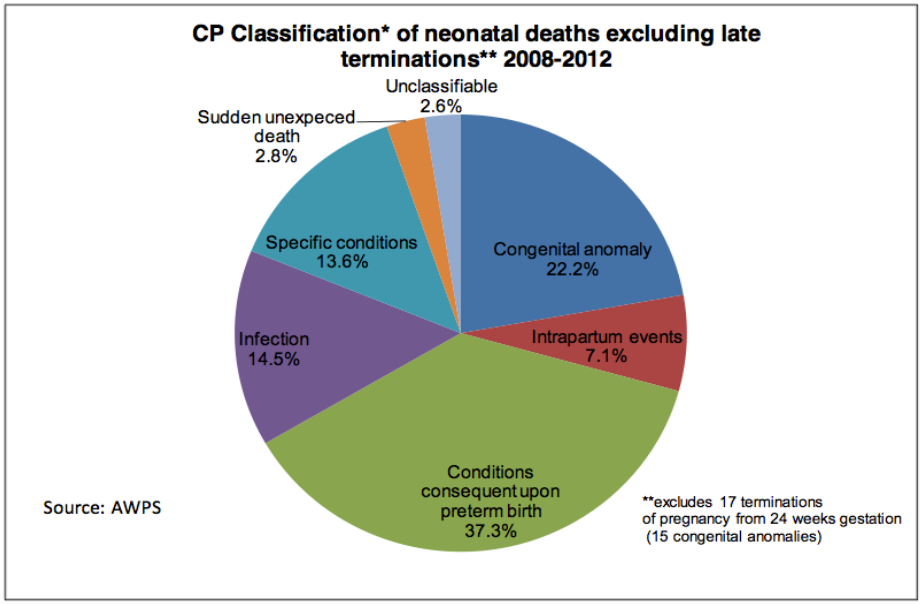
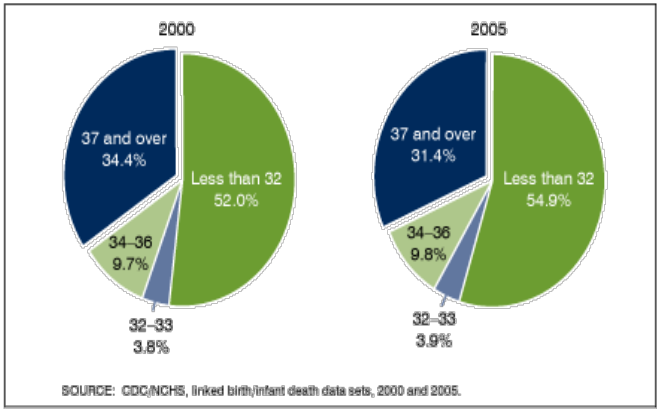


Figure 5. Percentage of infant deaths by weeks of gestation: United States, 2000 and 2005

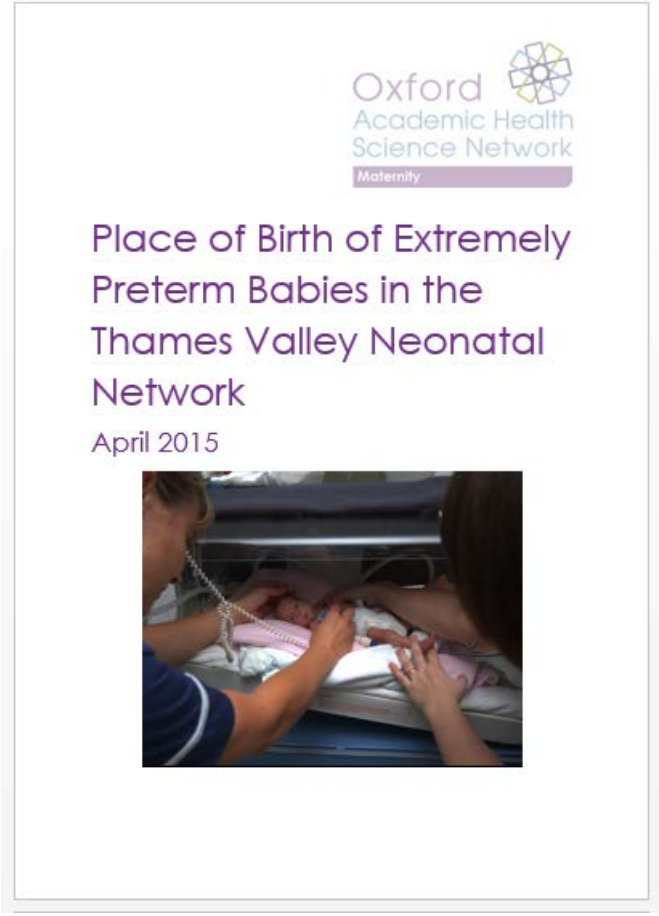


Preterm delivery

‘Place of Birth of Extremely Preterm Babies in the Thames Valley Neonatal Network’

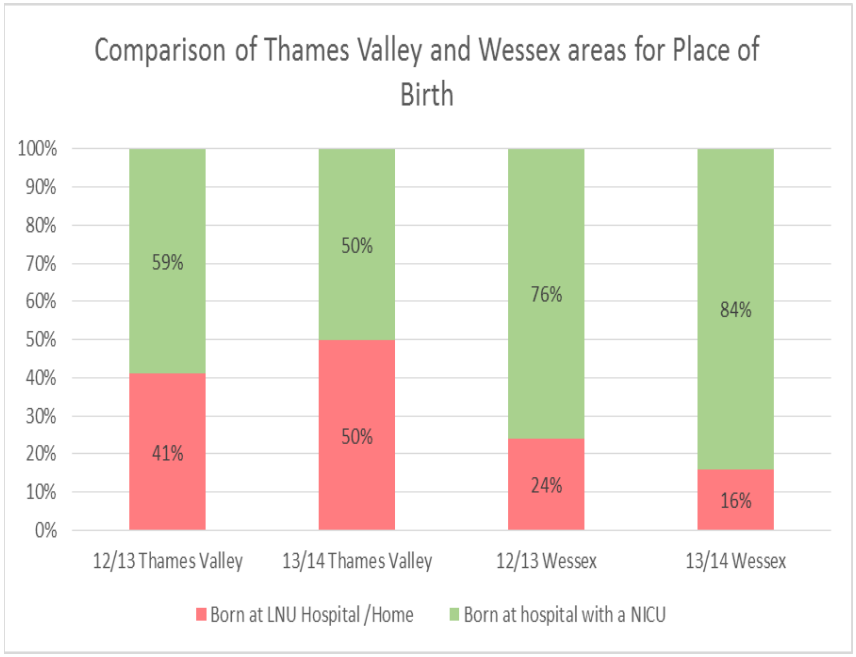
April 2015

http://www.oxfordahsn.org/wp-content/uploads/2015/05/Place-of-Birth-of-Extremely-Premature-Babies-in-the-Thames-Valley-Neonatal-Network-Report-April-2015.pdf



Areas in need of serious improvement: preterm birth

Extreme preterm birth: where?



Is where important?

If <27 weeks/ 800g babies, are less likely to die if born in L3 NNU

Fewer antenatal deaths

Fewer postnatal deaths

Marlow et al.

Perinatal outcomes for extremely preterm babies in relation to place of birth in England: the EPICure 2 study. Arch Dis Child Fetal Neonatal Ed. 2014 May;99(3):F181-8. doi: 10.1136/archdischild-2013-305555. Epub 2014 Mar 6

What we found:

Why women were not being transferred:

Conservative estimate that >40% could have been transferred

Poor use of diagnostic aids: Ffn used in 9.1%

Didn't know/ understand transfer policy

Over complicated urgent transfer pathway into Oxford

What else was happening?

Erratic use of medications to improve outcome

- Steroids in 82.8%
- Magnesium in 20.7%

Inconsistent but frequent tertiary level management occurring locally

Drug safety: magnesium

Different hospitals' policies lead to confusion among rotating trainee doctors

Major drug error led to near miss maternal death

	BUCKS	MKH	OUH	RBH	WPH
Dose of $MgSO_4$	16mmol (4g)	8ml 50% (4g)	8ml 50% (4g)	8ml 50% (4g)	8ml 50% (4g)
Volume of N.saline	12ml	42ml	12ml	32ml	42ml in 100ml bag
Total volume	20ml	50ml	20ml	40ml	50ml
Syringe driver	YES	NO	YES	NO	YES
Rate of infusion	5-15mins	10mins	10mins	10ml/5mins	10mins @ 300ml/hr

What was needed?

As a start….

1. Urgent change to in utero transfer policy in Oxford.

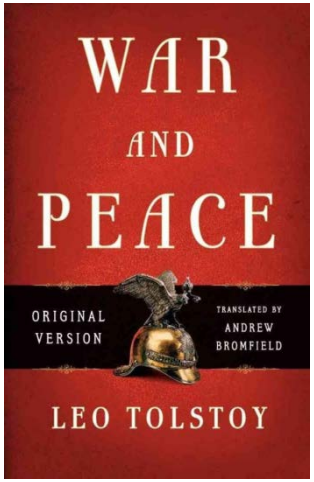
2. Network-wide guidelines incorporating best practice, with transfer policy: for preterm delivery and conditions relating to it

3. Consistent magnesium policy/ guideline

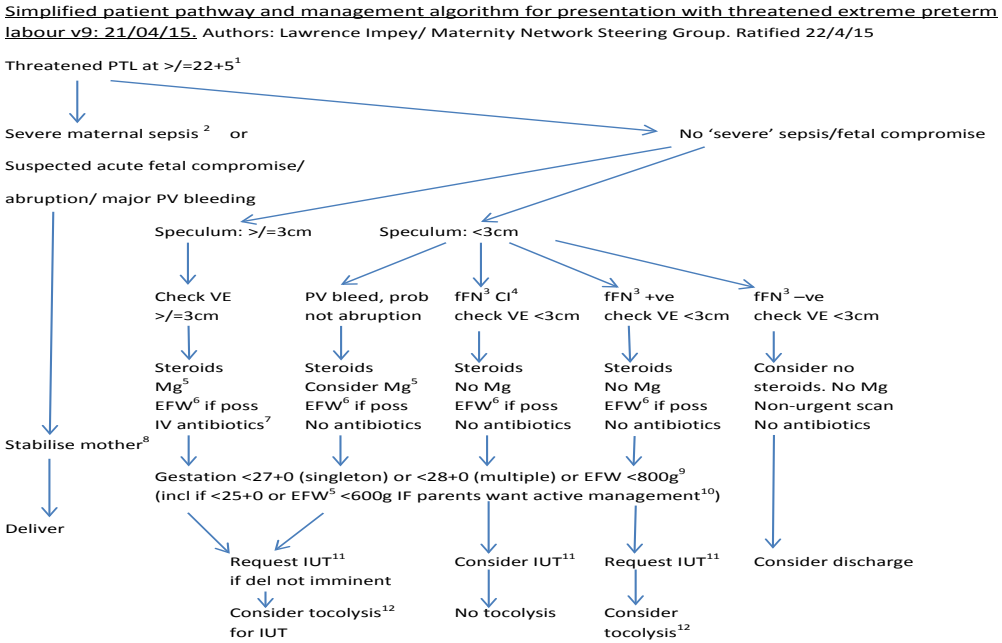
A network guideline

Guideline

NICE: Intrapartum Care
Care of healthy women and their babies during childbirth
(839 pages)



Guideline



1. Note active resuscitation for neonates <23+0 will not usually be performed. The management pathway should not be followed prior to 22+5 the 3 day difference allowing for steroids etc. Dates according to CRL excl in IVF pregnancies.
2. Sepsis meeting criteria for severe sepsis bundle
3. fFN: fibronectin or equivalent to assess likelihood of preterm delivery more accurately than history and examination
4. CI: contraindicated/ not recommended. Consider fFN usage if postcoital as false negatives unlikely
5. Mg: Magnesium bolus 4g (16mmol) Magnesium Sulphate as 20mls of 20% magnesium sulphate IV over 5 – 10 minutes
6. EFW: estimated fetal weight +/-15% if possible
7. IV antibiotics. Follow unit antibiotic guideline; avoid co-amoxiclav
8. Stabilisation of acutely unwell mother beyond scope of this.
9. Criteria for delivery in Level 3 Neonatal Unit
10. If time, offer discussion with paediatrician. See leaflets
11. IUT: in utero transfer, try OUH first. 8-5pm call Delivery Suite (01865 221988/7), and specifically request to speak to the consultant obstetrician on Delivery Ward. From 5pm to 8am, hospital switchboard (01865 741166), with the request to speak to the obstetric consultant on call. DO NOT call neonatal unit or delivery ward manager first.
12. Tocolysis. Follow unit tocolysis guideline. Do not use nifedipine if magnesium given or to be given

Another…

Oxford Academic Health Science Network
Maternity

Network PTL transfer policy change v2 15/12/2014

Urgent in utero transfer to the John Radcliffe Hospital

Where there is a risk of extreme preterm delivery, either iatrogenic or spontaneous, in utero transfer to a neonatal unit is advised by BAPM: extreme preterm birth is associated with a decrease in neonatal mortality and morbidity if it occurs in a level 3 neonatal unit (Marlow et al 2014). Currently, in the Thames Valley network, over 50% of extremely preterm babies are born outside the level 3 centre. This issue is currently the subject of much scrutiny and is likely to be assessed as an important measure of the quality of a maternity unit's performance at some stage in the near future.

An audit by the Maternity Network of the AHSN has identified, perhaps not surprisingly, that in utero transfer within the Thames Valley to the John Radcliffe Hospital as the local Level 3 neonatal unit can be difficult to achieve, and the John Radcliffe Hospital's refusal to take in utero transfers has been a reason why delivery has taken place outside a Level 3 neonatal unit. It is also recognised that capacity alters rapidly over a short time frame and that delivery may occur days later than transfer and therefore neonatal capacity at the exact time of referral may be irrelevant.

In response to this we have agreed the following policy change:

Requests for urgent in utero transfer to the John Radcliffe Hospital should initially be directed to the **Consultant Obstetrician on call**, rather than the neonatal unit.

From 8am-5pm this call should be made to the Delivery Suite (01865 221988/7), with the specific request to speak to the Consultant Obstetrician on Delivery Suite.

From 5pm to 8am, the call should be to the hospital switchboard (01865 741166), with the request to speak to the Consultant Obstetrician on call.

Only in exceptional circumstances (such as imminent delivery and neonatal unit red alert) will transfer be declined. If transfer is declined by either the neonatal unit or the Delivery Ward, without speaking to the consultant on call, then please request specifically to speak to the consultant on obstetrician on call.

We very much hope that this will make IUT easier and therefore increase patient safety in these extreme circumstances. If however, the John Radcliffe Hospital is unable to accept delivery, every effort should be made to move the mother to an alternative level 3 unit. We would be grateful if this information is disseminated locally.

Case study: baby 'C'

25+4 threatened preterm labour but not in labour

Methods to stop labour instituted

Rapid IUT to Oxford under new pathway before 17.00

Review in Oxford by duty team: pt very well, plan to wait

Review in Oxford by fetal medicine team: although clinically very well, evidence of sepsis, acidotic, urgent delivery required

Labour induced, urgent antibiotics, 805g girl, ICU, discharged to local unit at 3 weeks of age

Mother recovered well

Maternal sepsis:	mid trimester major cause of maternal death
Fetal neonatal sepsis:	greatly increases risk of disability or death in preterm babies

Other areas

Appropriate transfer for sick and small babies

Appropriate referral or non-referral

Tackle local issues and have network policy on stillbirth and growth restriction, its principal precursor

Screening for preterm delivery