

Return to the Future..

Implementation of science: After Hannah's Term Breech Trial (TBT 2000)

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The Term Breech Trial effect

Is Caesarean section safe ?



What about maternal choice and **informed consent**?

Is external

The Social



influence

clinician ?

Is vaginal breech birth safe?



What about litigation?

Clinical skill and experience in vaginal breech birth (VBB)

A UK issue – *and wider maybe..*

Not secure | breechbabiesclub.org/the-breech-free-birth-of-wilde/

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The breech freebirth of Wilde

Hi everyone, just wanted to let you know that our baby girl, Wilde Honey Valentine May was freeborn at 10.30pm on 29th April. 8lb 4oz.

Towards the end of a lovely, unassisted pregnancy I had become instinctively questioning about the baby's presentation – head down only felt right on some days and when s/he had hiccups that felt very low, otherwise I could feel a high, hard ball that wobbled like a head when palpated. This was my fifth term pregnancy and having had a footling breech baby in 2000, I could remember what to feel for. I was aware I had a lot of water and the

Search our breech birth stories and articles

Categories

[Academic papers \(3\)](#)

So where do we start?

- **The 3 approaches to the term breech baby**
 - ECV (external cephalic version)
 - CS
 - VBB (vaginal breech birth)
- **Maternal issues**
 - VB versus CS
- **Fetal issues**
 - VB versus CS
 - Cephalic birth versus VBB
- **Research**

Proven facts in ECV

ECV success rate = 49% of 2600 cohort
(P0 n= 1632 P1+ n= 978)



Reversion to breech
2.2%



Em CS rate
0.5%



No direct fetal
deaths/injury



Primigravid ECV 40% success rate



Multigravid success rate 64%



Of those
successful
76% VB



Of those
successful
92% VB

Proven facts in **CS** for the mother

(NICE CG 132. 2011)

Positives

- A date for delivery
- Reduced perineal and abdominal pain
- No labour pain
- Reduced pain in 3 days postpartum
- Minimal chance of injury to vagina
- Reduced incidence of early postpartum haemorrhage

Negatives

- Greater incidence of neonatal intensive care unit admission
- Longer hospital stay
- Hysterectomy caused by postpartum haemorrhage
- Cardiac arrest - death
- Blood transfusion
- Endometriosis

Maternal issues..

THIS mother *NEXT TIME??*

VBAC (vaginal birth after caesarean)

1. 50% of women opt for elective repeat caesarean section (ERCS) for a subsequent child
2. 0.25 risk of scar rupture
3. 0.04% perinatal mortality - the same risk as primiparity labour

• **A modern risk..**

1. Abnormally invasive placenta
 - I. 1 prev CS 1.04/1000
 - II. ≥ 3 prev CS 8.8/1000

Thurn et al 2015

Fetal issues *CS* vs *Vaginal birth*

Caesarean delivery

- 4 x SCBU admission risk for respiratory distress
- No labour associated asphyxia risk
- Performed at the golden 39th week of gestation

Vaginal birth

- Fetal catecholamine release is protective
 - Diabetes
 - Obesity
 - Some childhood leukaemia's
- Maternal biome
- Increased surfactant and excretion of lung fluid
- Labour associated asphyxia risk

Fetal Issues

Mortality facts in *Cephalic birth* and *VBB*

The cephalic baby

- Chance of perinatal mortality (PNM) at 39 weeks by not performing a CS

- Stillbirth at 39 weeks = 0.3/1000

+

- Labour associated risk = 1/1000

=

1.3/1000

The breech baby

- Chance of perinatal mortality (PNM) at 39 weeks by not performing a CS

- Stillbirth at 39 weeks = 0.3/1000

+

- Understood link of fetal abnormality in breech presentation = ??

+

- Labour associated risk = ??

= ??

Proven facts in VBB – where and what are they?

How do **YOU** observe risk of **CS** versus **VBB??**

- Risk of preterm birth next time after a late labour CS; relative risk 1.57 at <32/40 and 2.12 at >37/40 (Wehberg et al, 2018)
- Fetal PNMR of 1:100 (TBT 2000)
- Risk of maternal death 21.9:100,000 in CS versus 3.8:100,000 in VB (T Van Akker 2018)
- Greater risk of death, ICU admission, blood transfusion, hysterectomy and antibiotic requirement in CS delivery and it is higher in the intrapartum group (Vilar et al 2007).
- Fetal PNMR 1.6:1000 (Vlemmix 2014)

How do **YOU** observe risk of **CS** versus **VBB**??

What is all the fuss, I have never had a problem

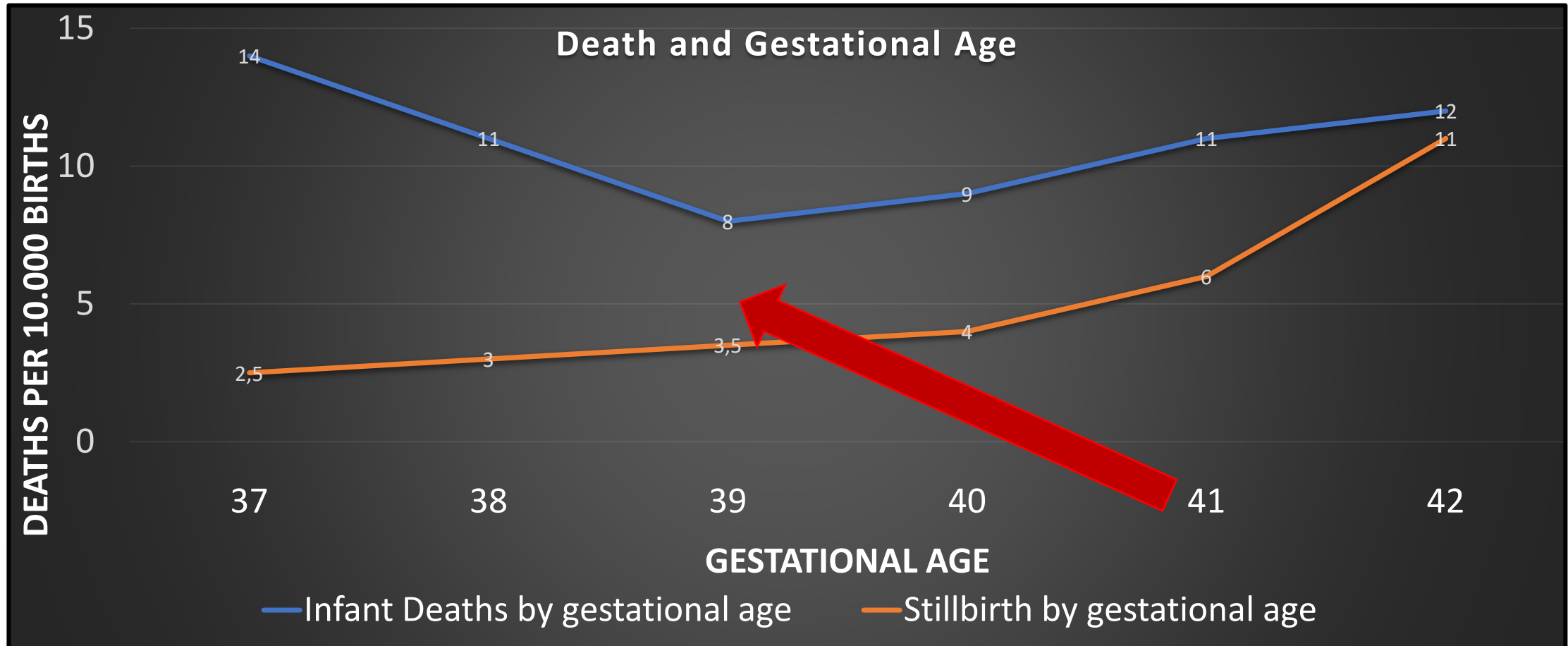
I have helped many women give birth to a breech baby

I have never seen a breech baby born vaginally

I am scared.. I have seen a difficult birth



Using research to guide..



Research that will potentially change largescale clinical practice should be peer read – this one was published without it

at different gestations.. And there were other failures..

9.6% VB in CS planned cohort.
These outcomes were moved to the planned breech cohort

It did not consider this mother next time.
Evidence indicates mothers have died in the *next* labour (Van Den Akker 2018)

The authors of the Term Breech Trial conceded that most cases of neonatal morbidity initially cited were not related to mode of delivery (Glezerman 2012)

The two year follow up study demonstrated no significant long-term differences in fetal outcomes between the 2 cohorts (Hannah et al 2002)

The Term Breech Trial (Hannah et al 2000)

Standards and Actual management

Standards

- Singleton
- Defined VBB and CS cohorts
- No fetal anomaly
- Flexed head
- <4Kg
- Contraindication to vag birth
- IOL/augmentation
- IA or continuous monitoring
- ≥ 0.5 cm per hour 1st stage
- 2 hour 2nd stage descent
- Birth imminent ≤ 1 hour of active pushing
- Experienced Clinician

Actual management

- Multiples included
- Switching of groups and outcomes
- Fetal abnormality outcomes included
- Limited US confirmation of head attitude
- BW >4Kg and <2.5Kg

- Prolonged labours
- Inconsistent adherence
- Inconsistent adherence
- Not adhered to

PREMODA

(PREsentation et MODe d'Accouchement. Goffinet et al 2006)

Standards

- Pelvimetry
- US exclusion of hyperextension
- 2.5-3.8Kg wt estimate
- Frank/complete breech
- Lack of progress definition
- 1st stage duration guidance
- Passive and active guidance to 2nd stage
- Defined VBB and CS groups

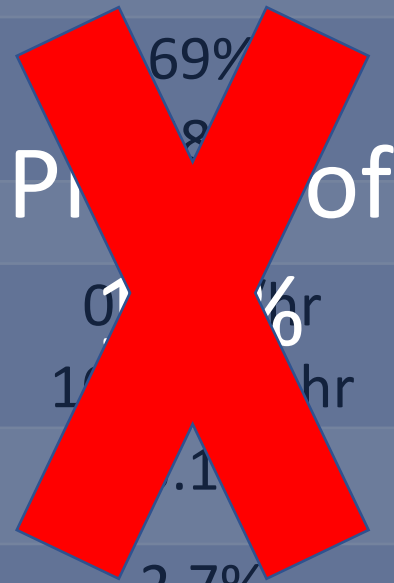
Actual management



Good adherence to study standard

Using Research to guide us

Labour Management	TBT n = 1 042/591	PREMODA n = 2 526/1 795
eFM	33.4%	100%
Experienced obs	68%	92.3%
US for extended head /fetal weight	69%	100%
Pelvimetry	8%	100%
1 st stage	0.1% per hr 1.1% per hr	82.4% 0.08%
Passive 2 nd >60 min	1.1%	18.1%
Active 2 nd ≥90 min	2.7%	0.0%
Active 2 nd ≥60 min	5%	0.2%
Vaginal birth	56.7%	71%



PNMR of

PNMR of

0.08%

Term breech deliveries in the Netherlands

(Vlemmix et al 2014)

58 320 non-anomalous term breeches in population of 1.4 mil births (1997-2007)

CS increase from 24% to 60% between 1997 and 2007

	Pre TBT	Post TBT
PNMR of all breech	0.13%	0.07%
PNMR planned VBB	0.17%	0.16%

- Perinatal mortality 1.6/1000
- Perinatal mortality TBT 10:1000

So where did we start?

Women who have a breech presentation at term following an unsuccessful or declined offer of ECV should be counselled on the risks and benefits of planned breech delivery versus planned caesarean section.

Women should be informed that when planning delivery for a breech baby, the risk of perinatal mortality is approximately **0.5/1000 with caesarean** section after 39+0 weeks of gestation; and approximately **2.0/1000 with planned vaginal breech** birth. This compares to approximately **1.0/1000 with cephalic delivery**.

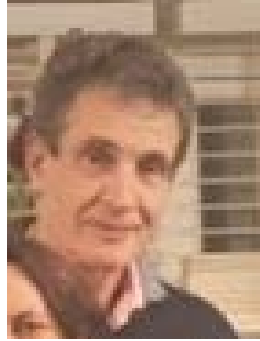
The presence of a skilled birth attendant is essential for a safe vaginal breech birth.

VBB context and other breech babies

- Skill in vaginal birth has declined (MacKenzie et al 2003)
 - Skill was identified in the TBT - better outcomes link with repeat clinical exposure to VBB
 - Morbidity in VBB was higher in countries where the overall PNMR was low
- | | |
|---------------------------|-----------------------------------|
| Low PNMR country: | Planned VBB morbidity 5.1% |
| High PNMR country: | Planned VBB morbidity 2.6% |

The current OUH team

Cover a 24
hour rota to
provide
consistency
in care



Be prepared to
work as a
multidisciplinary
team

Involve the paed
team in
preparation

Draw in students
and trainees –
these are the
future care
providers

Debrief from
each birth to
improve the
future
Create teaching
and training
opportunities

Oxford Outcomes

	Premoda (routine use of oxytocin)	Oxford n=94/135 (6 did not labour*) (No augmentation**)
efm	100%	95% (7 undiagnosed MLU)
Experienced Obs	92.3%	??
US for extended head	100%	95%
1st stage	81.2% < 7hr (66.2% < 4hr)	92% < 7hr (75% < 4hr of whom 31 were Primipara)
Passive 2nd stage	18.1% > 60 min (66% < 30 min)	22% > 60 min (36% < 30 min)
Active 2nd ≥ 90 min	0%	0%
Active 2nd ≥ 60 min	0.2%	19% **
Spontaneous birth	71%	70% (73%*)

Neonatal outcomes

Vaginal or CS	Days in SCBU	Fetal health	Fetal abnormality
CS Planned VBB no labour	6	AN Abruption Severe acidosis	No
VBB	1	Chest Infection	No
VBB	14	Fitting	Ideopathic epilepsy ? Metabolic
CS	26	Infection	Congenital syphilis
VBB	10	HIE 1	None
VBB	10	Birth trauma HIE 0	? Investigating congenital abn
VBB	1	Respiratory distress	No

Does breech delivery in an upright position... improve outcomes?

269 vaginal breech births in 747 term breech presentations. (Louwen et al 2016)

Planned VD n = 435* Planned CS n = 314	Dorsal (n=40)	Upright (n=229)	Caesarean Section
Manoeuvres required – body/arms	92.5% (37)	17.5% (40)	
Manoeuvres required - head	87.5% (31)	38.4% (88)	
Total	95% (38)	43.7% (100)	
Birth injury			
Birth injury	10% (4)	0.9% (2)	1.6% (5)
Total	1.8% (6)		1.6% (5)
ICU >4 days	5% (2)	2.6% (6)	

A fathers perspective

An question to go home with...

The 1.6:1000 risk cited as risk – is it correct?

It comes from lithotomy approach which seems to have higher associated risks if Louwen 2016 is to be believed..

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