Transfer times from Midwife-led Units in England and Wales (with notes on Scotland):
Is there any evidence to suggest that journey times to consultant led care of over 45 minutes are safe?

Background and Context:

It is being proposed that consultant-led obstetric care should cease at in Whitehaven and that midwife-led care should be provided instead (1). Approximately 25% of women who attempt to labour in a midwife-led unit need to transfer to an obstetric unit (2). If 400 women per year attempt to labour in a midwife-led unit in the West Cumberland Hospital (WCH) in Whitehaven we should therefore expect that 100 (approximately 2 per week) will need to transfer to the Cumberland Infirmary (CI) in Carlisle.

AA Route Planner lists the journey time from Whitehaven (WCG) to Carlisle (CI) as being 56 minutes. Ambulances cannot go much faster as traffic is heavy on the A595, overtaking is difficult, and large vehicles such as ambulances cannot drive at high speeds along twisty roads. Average transfer times (measured from the time when a decision to transfer is made until the patient is booked in) from Whitehaven (WCH) to Carlisle (CI) were provided as being 102 mins 33 seconds in the 2006 consultation on maternity services in Whitehaven (3). I have been unable to obtain more recent values.

There are substantial reasons to believe that the journey from Whitehaven to Carlisle will lead to poor birth outcomes for some of the women who transfer. For example, the NICE guidance on caesarean Sections (4) states that when there is immediate threat to life of the mother or fetus a section should be carried out within 30 minutes and when there is maternal or fetal compromise which is not immediately life-threatening a section should be carried out within 75 minutes.

It is useful to consider the reasons why women transfer. NICE Guidance (5) lists these as being:

- "Observations of the woman:
  - pulse over 120 beats/minute on 2 occasions 30 minutes apart
  - a single reading of either raised diastolic blood pressure of 110 mmHg or more or raised systolic blood pressure of 160 mmHg or more
  - either raised diastolic blood pressure of 90 mmHg or more or raised systolic blood pressure of 140 mmHg or more on 2 consecutive readings taken 30 minutes apart
  - a reading of 2+ of protein on urinalysis and a single reading of either raised diastolic blood pressure (90 mmHg or more) or raised systolic blood pressure (140 mmHg or more)
  - temperature of 38°C or above on a single reading, or 37.5°C or above on 2 consecutive occasions 1 hour apart
  - any vaginal blood loss other than a show
  - the presence of significant meconium (see recommendation 1.5.2)
  - pain reported by the woman that differs from the pain normally associated with contractions
  - confirmed delay in the first or second stage of labour
  - request by the woman for additional pain relief using regional analgesia
  - obstetric emergency – including antepartum haemorrhage, cord prolapse, postpartum haemorrhage, maternal seizure or collapse, or a need for advanced neonatal resuscitation
  - retained placenta
  - third-degree or fourth-degree tear or other complicated perineal trauma that needs suturing.
- Observations of the unborn baby:
  - any abnormal presentation, including cord presentation
  - transverse or oblique lie
  - high (4/5–5/5 palpable) or free-floating head in a nulliparous woman
  - suspected fetal growth restriction or macrosomia
  - suspected anhydramnios or polyhydramnios
  - fetal heart rate below 110 or above 160 beats/minute
  - a deceleration in fetal heart rate heard on intermittent auscultation."

It is clearly reasonable to expect that some births will take place in transit (6 - Urgency and Outcomes).

An interview study of women's experiences of transfer from midwife-led units to hospital during labour (2) describes how, while transfer is a mere hiccough in labour for women who are transferred short distances, transfer is an extremely stressful experience for women who had transfer times of an hour. Researchers were unable to find women who had transfer times greater than one hour.

The purpose of the new analysis presented in this report is to explore whether there is any evidence from experiences in England, Wales or Scotland to suggest that the transfer times from Whitehaven to Carlisle are safe.

Analysis:

AA Route Planner journey times are used throughout to allow fair comparison.

Midwife-led Unit	Transferring to	No. Births	Distance (miles)	Time (minutes)
Whitehaven (WCH) (Proposed)	Carlisle (CI)	300 (est.)	39	56

England:

At present only 40 births per year take place in midwife-led units where the journey time to the nearest consultant let unit is more than 35minutes (AA Route Planner). These occur as follows:

Midwife-led Unit	Transferring to	No. Births 2014/15	Distance (miles)	Time (minutes)
England (transfer time over 35 mins)				
Berwick-Upon-Tweed	Cramlington	10	59.2	73
Alnwick	Cramlington	30	29.9	38

The Berwick unit has been associated with two maternal mortalities (7) (when the unit transferred to Ashington, which is closer than Cramlington). UK maternal mortality is less than 1 in 10 000 (8).

There is therefore clearly no statistically significant evidence from England to suggest it is safe for women to give birth in a centre where the journey time to the nearest consultant let unit over 45 minutes.

Furthermore, in a substantial research study which considered 11,210 births planned in freestanding midwife-led units (FMUs) (5) found that "Around two thirds of FMUs were located within 20-40 km of the nearest OU in the same NHS trust, with a small number located further than 40 km away. These more distant FMUs accounted for around 2% of planned FMU births"

Given that "Less than 2% of births in England (about 12,000 a year) happen in freestanding midwife-led units"(9) it is reasonable to conclude that only approximately 240 births a year in England happen in midwife-led units which are more than 25 miles from an Obstetric Unit. Whitehaven (WCH) is 39 miles from Carlisle (CI).

England – Methodology:

My starting point was the 2006 report (3) which researched the AA Route Planner times for all midwife-led units from consultant led care. I adjusted results in the North East to take account of the changing journey times in Northumberland caused by obstetric services moving from Ashington to Cramlington. I then considered all freestanding midwife-led units opened between 2004 and 2013 (9). I researched each centre on the 'Which' website which shows proximity to other birth facilities. Where journey times to consultant led facilities were less than 25 minutes on The 'Which' summary page I discounted these facilities as being more than 35 minutes away from consultant led care. Where there was no 'Which' page or journey times were over 25 minutes I either carried out further research using AA Route Planner or I found internet articles which stated that the unit had closed.

Wales

Only approximately 60 births per year take place in midwife-led units where the drive-time to the nearest consultant led unit it over 45 minutes. These take place in very rural areas of Powys where there has never been a district general hospital.

As negative birth outcomes are measured in incidences per 10 000 (with maternal death being less than 1 per 10 000) there is therefore clearly no statistically significant evidence from Wales to suggest it is safe for women to give birth in a centre where the journey time to the nearest consultant let unit over 45 minutes. There may be statistically significant evidence from Wales to suggest that transfer times of over 45 minutes are unsafe but this analysis (if it has been completed) is not in the public domain and cannot be accessed through FOI due to the issues of confidentiality which exist when sample sizes are very small.

Experts have raised substantial concerns regarding the safety of encouraging first-time mothers to give birth in the Powys midwife-led units (10) as their transfer rates are 36% (6).

Wales - Methodology

A comprehensive list of freestanding midwife-led units in Wales is provided in the 2013 report on these units (9).

I've researched the journeys from all the listed freestanding midwife-led Units in Wales to the nearest consultant led obstetric facilities. Information for the new Withybush midwife-led unit has been added.

AA Route Planner is used throughout for consistency and comparability. The postcodes given for the midwife-led units and their closest consultant led services have been used.

Birth numbers are for come from the Welsh Government Statistics Office (2014/15 data) (11) except where starred* because information for some units is combined. For these units birth numbers come from 'Which' (2013/14).

† The value for Withybush comes from the report on its first year of operation (year to 31 July 2015) (11).

? Where no figures are available from any source numbers are likely to be very low.

Midwife-led Unit	Nearest Consultant let Obstetric Unit	No. Births	Distance (miles)	Time (minutes)
Whitehaven (Proposed)	Carlisle, Cumberland Infirmary	300 (est.)	39	56
Wales: Opened since 2001				
Caerphilly Birth Centre, Ystrad Fawr	Neville Hall Hospital, Abergavenny	273	23.2	39
Ysbyty Bryn Beryl, Pwllheli	Ysbyty Gwynedd, Bangor.	0	26.1	42
Neath Port Talbot Hospital	Princess of Wales Hospital, Bridgend	388	15.9	23
Denbigh Infirmary	Glan Clwyd Hospital, Rhyl	?	9.3	18
Ysbyty Aneuran Bevan, Ebbw Vale	Nevill Hall Hospital, Abergavenny	8	12.2	23
Wales: Open since before 2001				
Dolgellau & Barmouth District Hospital	Bronglais Hospital, Aberystwyth,	0	33.6	58
Tywyn & District War Memorial Hospital	Bronglais Hospital, Aberystwyth,	0	32	57
War Memorial Hospital, Brecon	Nevill Hall Hospital, Abergavenny	30*	19.2	31
Knighton Hospital	Hereford County Hospital	10*	31	54
Llandrindod Wells Community Hospital	at Nevill Hall Hospital, Abergavenny	?	39.1	62
War Memorial Hospital, Llanidloes	Bronglais Hospital, Aberystwyth	20*	30	48
Montgomery County Infirmary, Newtown	Wrexham Maelor Hospital	30*	44	65
Victoria Memorial Hospital, Welshpool	Wrexham Maelor Hospital	20*	30.2	44
Wales: New (not on the list)				
Withybush General	Glangwili General Hospital, Carmarthen	162†	33.2	44

Scotland Notes:

A full analysis of transfer times in Scotland is provided in the 2006 report (3). Since then an obstetric unit with a helipad has been built at the new Queen Elizabeth Hospital in Glasgow (13). Consultant teams can also be sent out by helicopter, allowing treatment in transit.

Very substantial concerns regarding maternity care in the northern highlands have been exacerbated by a neonatal death at Wick General Hospital where Obstetric Consultant led services were retained without paediatric services. I have been strongly advised by councillors in the northern highlands not to look to this area for advice because they are unhappy with what's going on there and the numbers of mothers involved are much lower than the numbers we are dealing with in West Cumbria.

Conclusion

It is reasonable to conclude that closure of the obstetric unit in Whitehaven is highly likely to be associated with increased perinatal and maternal risk due to the issue of transfer times. No evidence has been found to contradict this conclusion.

National records of the reasons why transfers take place exist (6). Therefore the level of risk could be assessed by experts who consider the weighted likelihood of each cause of transfer and who estimate the likely impact on birth outcomes of transfers from a midwife-led unit in Whitehaven to a consultant led unit in Carlisle for each cause of transfer. No such analysis has been carried out.

As the public consultations continue, the fears of local people (which are usually grounded in their personal experiences of potentially dangerous situations which they consider may have been fatal had obstetric services not been available in Whitehaven) are escalating because these fears are not being challenged by any credible data. As an elected councillor I engaged with the consultation process expecting to be able to help calm fears by helping to communicate the statistical information which would reassure people. I was horrified to find that no such information exists. Furthermore no data has been presented to confirm the assertions that the risks and costs of continuing with two consultant led units are significant, or that cost savings will be made by discontinuing consultant-led care in Whitehaven.

Local expert consultants are not supporting the case for change as has been widely reported (14) but are instead speaking out unanimously against maternity options 2 and 3 (15), as are other key groups (16).

There is therefore an increasing atmosphere of hysteria and alienation (17).

This consultation is constructed to ensure that consultant-led obstetric care in Whitehaven (WCH) ends as none of the paediatric options being considered will enable it to continue.

I am at ease defending a credible (but unpopular) case for change and I consider it my duty to do so but no such case has been presented. I am therefore making the following recommendations:

Recommendations

The success regime consultation on obstetric and paediatric services should be suspended until:

- Experts have completed a risk analysis of the impact of transfers from Whitehaven to Carlisle, and have developed grounded estimates for the impact of transfers on birth outcomes.
- The overall financial and birth outcome benefits it presents can be clearly demonstrated when this risk analysis is taken into account.

The known risks associated with continuing with consultant led obstetric and paediatric care are the costs associated with employing locum paediatric consultants and the challenges of maintaining and developing consultants' skills in low volume units. It should be recognised that this consultation process is exacerbating these issues as it is damaging recruitment processes and it is drawing attention away from the process of consulting on ways of improving consultants' skills (at WCH and CI).

Moreover it should also be noted that the Health and Social Care Act of 2012 (Point 4) requires that "In exercising functions in relation to the health service, the Secretary of State must have regard to the need to reduce inequalities between the people of England with respect to the benefits that they can obtain from the health service." Discontinuing consultant-led obstetric and paediatric services should not be considered unless there is a clear argument to show that it is compliant with this clause.

Cllr. Rebecca Hanson MA (Cantab.), MEd. November 2016

With thanks to West Cumbria MSLC for assistance in locating maternity research and information.

References:

(1) The Future of Healthcare in West, North and East Cumbria: Public Consultation Document http://www.wnecumbria.nhs.uk/wp-content/uploads/2016/09/NHS-Cumbria-doc-LoRes.pdf

(2) Women's experience of transfer from midwifery unit to hospital obstetric unit during labour: a qualitative interview study, Rowe, Kurinczuk, Locock and Fitzpatrick, BMC Pregnancy and Childbirth (2012). http://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/1471-2393-12-129

(3) North Cumbria Acute Hospitals Trust Obstetric & Midwifery Services Review Steering Group Report May 2006 - Appendix 2 Lay Members Report: Implications for service users and their families and socio economic impacts arising from the closure of the medical obstetric unit at West Cumberland Hospital; A. Fearfield, D. Stamper & S. Guise of North Cumbria Maternity Service Liaison Committees. https://debbieandrebecca.wordpress.com/2016/10/25/west-cumbria-obstetric-services-documents/

(4) NICE Guidance: Caesarean section - Clinical guideline [CG132] Published date: November 2011 Last updated: August 2012, Section 1.4.3 https://www.nice.org.uk/guidance/cg132/chapter/1-Guidance#factors-affecting-likelihood-of-cs-during-intrapartum-care

(5) NICE Guidance: Intrapartum care for healthy women and babies - Clinical guideline [CG190] Published date: December 2014, Section 1.5 https://www.nice.org.uk/guidance/cg190/chapter/1-Recommendations#second-stage-of-labour

(6) Duration and urgency of transfer in births planned at home and in freestanding midwifery units in England: secondary analysis of the Birthplace national prospective cohort study. Rowe (R) et al. (2013). http://bmcpregnancychildbirth.biomedcentral.com/articles/10.1186/1471-2393-13-224

(7) Obstetrics (2006): John Eldred MA MB BChir FRCOG, Consultant Obstetrician and Gynaecologist, West Cumberland Hospital. 21st September, 2006. https://debbieandrebecca.wordpress.com/2016/10/25/west-cumbria-obstetric-services-documents/

(8) NPEU Confidential Enquiry into Maternal Deaths 2015: Saving Lives 2015 – Full Report. https://www.npeu.ox.ac.uk/mbrrace-uk/reports

(9) Trends in Freestanding Midwife-led Units in England and Wales 2001-2013 (The Royal College of Midwifes) https://www.rcm.org.uk/sites/default/files/FMU%20Trends%20-%20Web%20Final.pdf

(10) Sunday Times article discussed in a blog (2014) https://nhsreality.wordpress.com/2014/11/30/doctors-fears-over-midwife-birth-centres-higher-transfer-distances-increase-perinatal-mortality/

(11)Stats Wales, Numbers of Deliveries by Unit and Delivery Method: https://statswales.gov.wales/Catalogue/Health-and-Social-Care/NHS-Primary-and-Community-Activity/Maternity/numberofdeliveries-by-unit-deliverymethod

(12) Hywel Dda evaluation of maternity neonatal and paediatric services (Royal College of Paediatricians and Child Health: http://www.rcpch.ac.uk/improving-child-health/better-nhs-children/invited-reviews/hywel-dda-evaluation/hywel-dda-evaluation

(13) NHS Glasgow and Clyde article: http://www.nhsggc.org.uk/about-us/media-centre/news/2015/3/first-helicopter-lands-on-new-hospital-helipad/

(14) Theresa May's letter to Jamie Reed as reported on ITN (19th October 2016): http://www.itv.com/news/border/2016-10-19/prime-minister-general-consensus-to-downgrade-maternity-at-west-cumberland-hospital/

(15) Consultants are 'disturbed' by Success Regime claims, ITN (26th September 2016): http://www.itv.com/news/border/2016-09-20/consultants-are-disturbed-by-success-regime-claims/

(16) Midwife groups latest to oppose maternity move: News & Star (29th September 2016) http://www.newsandstar.co.uk/news/Midwife-groups-latest-to-oppose-maternity-move-d59d31ea-3d0e-4d9a-b2db-b3bc9e6e1c29-ds

(17) Campaigners 'play dead' to protest against maternity changes, ITN (19th October 2016): http://www.itv.com/news/border/update/2016-10-19/campaigners-play-dead-to-protest-against-maternity-changes/