Clinical and organizational impact of reorganisation of birth care services in Denmark

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Clinical and organizational impact of reorganisation of birth care services in Denmark

Contents of this talk

- Contextual facts about:
  - Pregnancy & childbirth in Denmark
  - The role of Danish midwives
- Reorganising birth services:
  - The Danish Birth Centre study: debate and new evidence
  - Caseload midwifery to increase continuity of care
  - Key points learned about providing efficient, high quality care for women and families
- Points for consideration in reorganising birth care services

(delivery room, Aalborg University Hospital)

Childbirth in Denmark – a few facts

- A population of approx 5.000.000 people
  - (the North Denmark Region approx. 500.000)
- Approx 60.000 births
  - 2% home; 0,5% freestanding midwifery unit; 97,5% obstetric unit
  - Perinatal mortality 6/1000; caesarean section 20%
- All childbirth and health care services are free (tax paid; no private birth care)
  - >99% of women attend the Danish pregnancy program:
    - ALL women have **shared care in pregnancy** between midwife (key professional, 4-7 visits) and general practitioner (3 visits)
    - All women offered pregnancy screening for fetal malformations:
      - 2 scans – week 12 + week 20 and blood test. NO RUTINE scans for fetal growth
    - ONLY high risk women see an obstetrician (or specialised midwife) too

Midwifery in Denmark: 300 years of authorisation

- **Autonomous** care for low risk women in pregnancy, birth and post partum **– in or outside hospital**
  - No electronic fetal monitoring (CTG), but frequent auscultation
  - No obstetrician or paediatrician at or after birth (unless called because of complications)
  - Authorised to give medication to stop bleeding, to suture birth tears and give pain relief for suturing
    (can buy specific drugs in pharmacy for private practice)

- Care for high risk women in pregnancy, birth and post partum **in cooperation with obstetrician.**
  - ***Some*** *midwives have local authorisation to perform instrumental delivery in hospitals (+ for emergencies in birth centres)*

Jordemødre
300 år med autorisation

An authorised midwife:

- **Is normally employed by a hospital with an obstetric unit. All units have a separate budget for** midwifery (administrated by a chief midwife):
  - **pregnancy care** (4-7 contacts) and **post partum care** (2 contacts)
    *(in a midwifery centre **outside** the hospital + local in small towns ect.)*
  - **Birth care** *(lead carer for low risk women, collaborative care for high risk women)*
  - **Home birth service**

  Hospital midwifery services may also include:
  - Antenatal screening *(routine scans for fetal malformations often by midwives)*
  - Post partum care *(some hospital have a midwifery-led post natal unit)*
  - Pregnancy care for high risk women *(supervised by obstetrician)*

- **Is free to set up her own practise** (women pay or a trust/region buy her services):
  antenatal care, birth preparation, birth centre, post partum hotel ect.

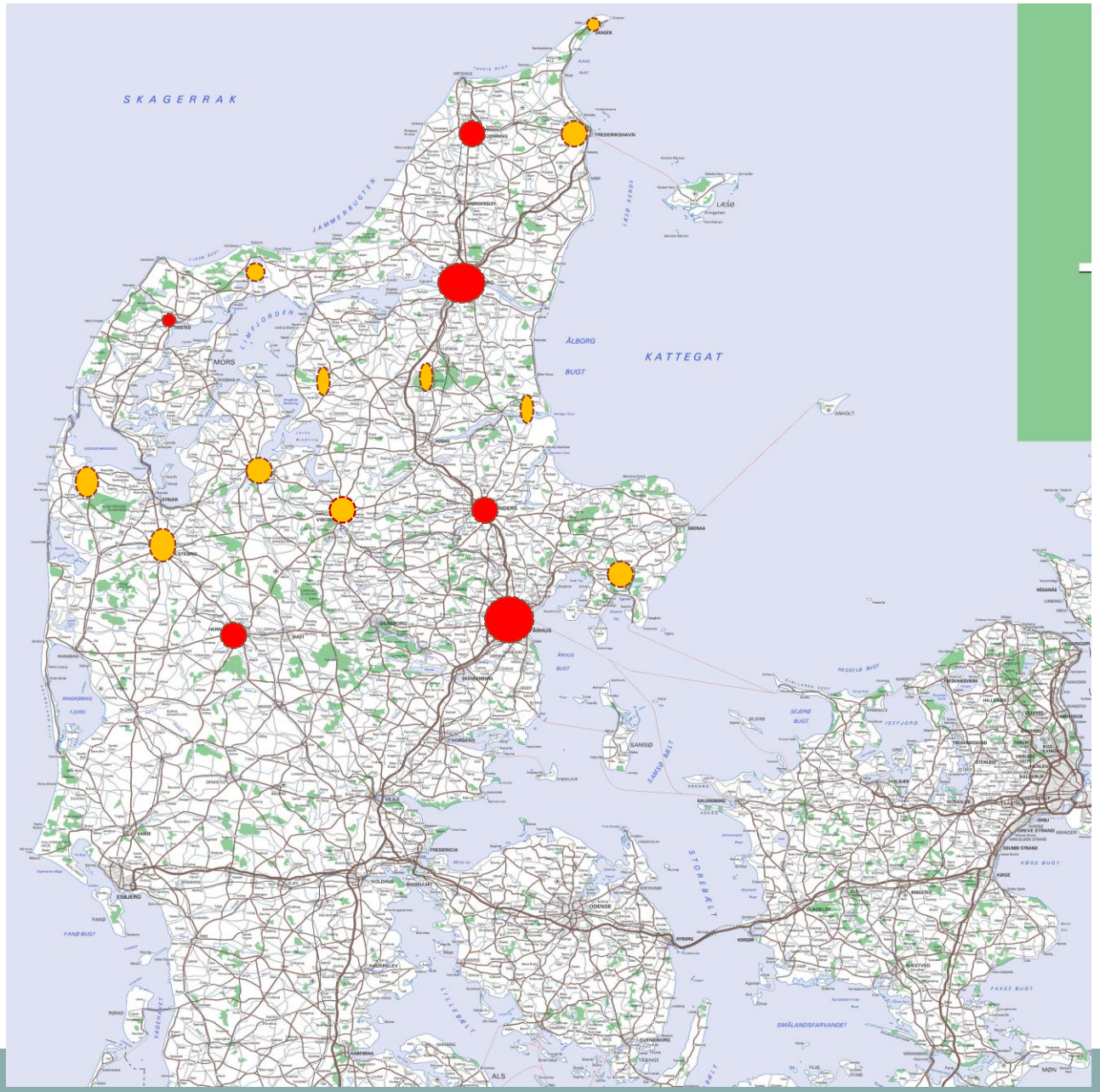
The concept

" Every woman needs a midwife,

and some women need a doctor too"

(Sandall 2013)

However – birth care is increasingly specialised and medicalised



Concerns in Danish birth care

- Services close due to specialisation and cut downs
  - Women have to travel far in labour (sometimes >100 km)
  - Local / rural communities loose services
- Lack of continuity:
  - Women may be attended by different (maybe 2-3) midwives during labour – all unknown to her.
  - Women often see different midwives during pregnancy
  - Women are likely not see their birth midwife again post partum
- Obstetric units are increasingly large (3-8000 births) and busy
  - Complaints over work overload and low job satisfaction among midwives
  - Use of interventions are increasing (especially induction and epidural)

Birthing room,
Aalborg University Hospital

This led to experiments with new organisations of birth care:

- Small birth units in local areas / towns were transformed into freestanding midwifery units for low risk women
- Caseload midwifery models were introduced to increase continuity

What is a midwifery unit?

A clinical location, offering care to **low risk women** during labour and birth, in which midwives take primary professional responsibility for care.

Some midwifery units are placed in large hospitals, a**longside** an obstetric unit

Today we focus on **freestanding midwifery units** (FMU), that are placed in small hospitals or stand alone

Obstetricians or paediatrician can not be called;
no caesarean section can be performed
– women are transferred by ambulance or helicopter
if sighs of complications arise

HOWEVER, A MIDWIFERY UNIT IS NOT JUST A PHYSICAL PLACE

Woman-centred, high quality care: four forms of continuity is key!

1) A stated staff commitment to a **shared philosophy of care**

2) Continuous carer responsibility

- Same midwife all though birth – BUT she may care for two or more women at the same time

3) **Continuous midwifery support** during labour

- A midwife is present with the woman all through birth – **one to one care** (but maybe not the same midwife)

4) **Continuity/ "knownness" of carer** (caseload midwifery)

- Care throughout pregnancy, labour, birth and the postnatal period is provided by same or a small group of 2-3 midwives

What form is most important?

No consensus in the literature on which aspect is most important however most evidence to support 3 and 4.

All four forms can – and should - be provided simultaneously:

1. Shared care philosophy among staff
2. Same midwife all through birth
3. Continuous support/one-to-one care all though labour
4. Known midwife: continuity of carer though pregnancy-birth-post partum

Focus in Denmark is on continuity of **carer**

Caseload midwifery:

- 2-3 midwives provide ante-, intra- and postpartum care for a caseload of women (e.g. 100-180 women) based on a shared philosophy of care
- Always one of the midwives in the team on duty, providing continuous labour support if possible..
  - One midwife from the group in on call 24h a day, 7 days in a row
  - *(after 11 h of call – colleague from unit will cover for 8 hours)*
- One day a week: pregnancy care.
  - The midwife going off duty and the midwife taking over are both present to ensure all women meet all midwives in the group before birth

Care differences:

Midwifery unit	Obstetric unit
Explicit shared philosophy of care - Including on active encouragement of mobility and use of upright positions during labour and birth	No explicit shared philosophy of care No shared policy on mobility and use of birth positions
Midwives in 24 h shifts High level of continuity (maybe known midwife)	Midwives in 8h and 12h shifts Limited continuity of carer
One-to-one care Continuous support when needed	Rarely one-to-one care Often not continuous support in labour until 6(-8) cm dilatation
Early labour: Women invited to text or call the midwife on duty at any time	Early labour: Women can call labour ward but rarely speaks to the same midwife twice
Quiet environment – women invited to "feel at home"	Busy environment, stay in birthing rooms
Emergency assistance from anaesthesiologist/ resuscitation-capable specialist nurse on site	Obstetric, anaesthesiological and paediatric service available on site
Epidural / interventions requires transfer by ambulance – other things tried first	Epidural / interventions easily available

It certainly sounds good – but is it safe??

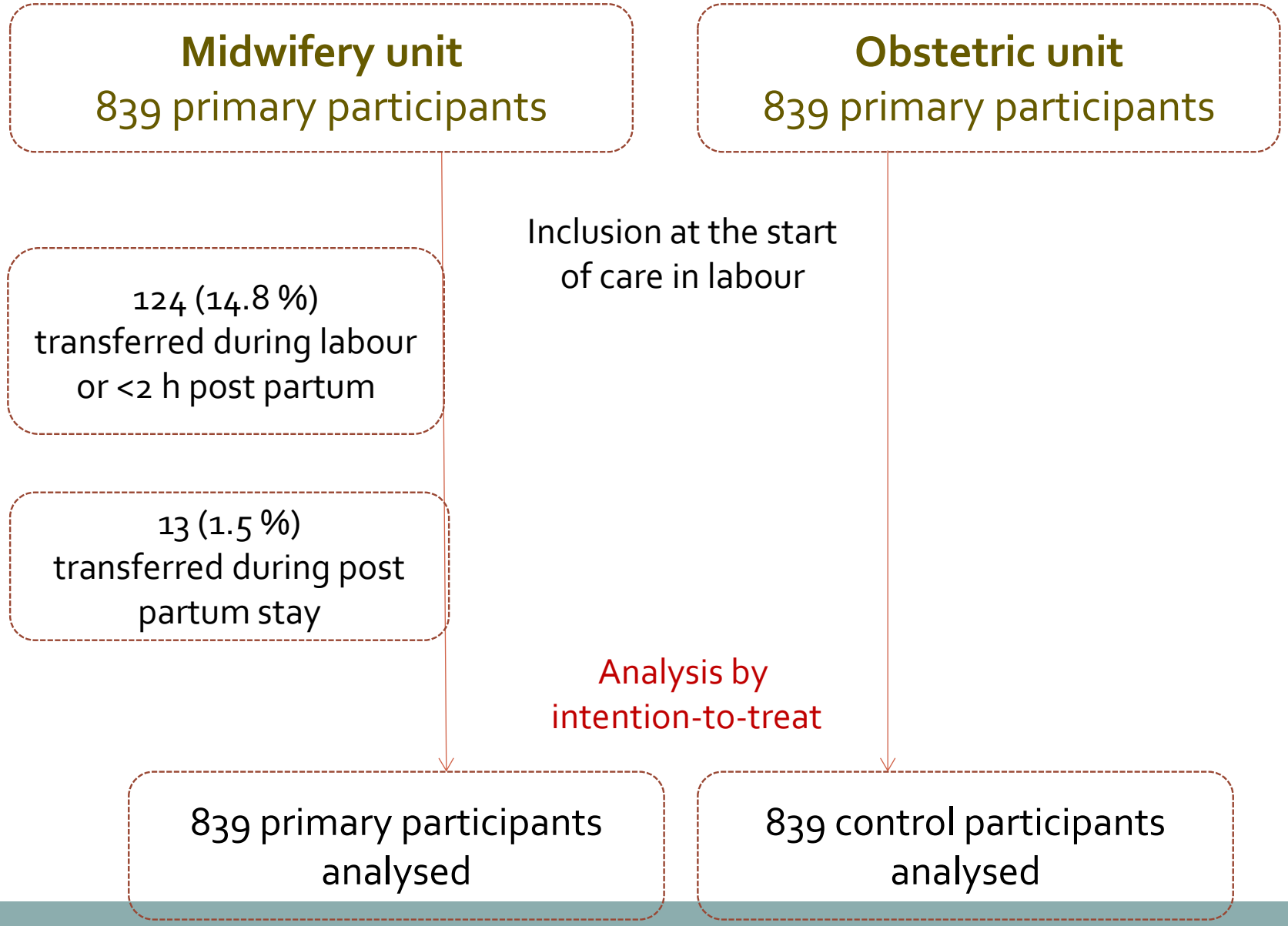
Limited evidence in 2004, so we set up a matched cohort study (the Danish Birth Centre study) investigating:

- perinatal and maternal morbidity,
- birth complications
- Birth interventions, and use of pain relief ?
- women's birth experiences, care satisfaction
- and perceptions of patient-centred care elements

in two freestanding midwifery units and two obstetric units in the same region

Only low risk women included; 25% first time mothers ; 50 min transfers

Participants - The Danish Birth Centre study



N of cases among the 839 participants from midwifery unit

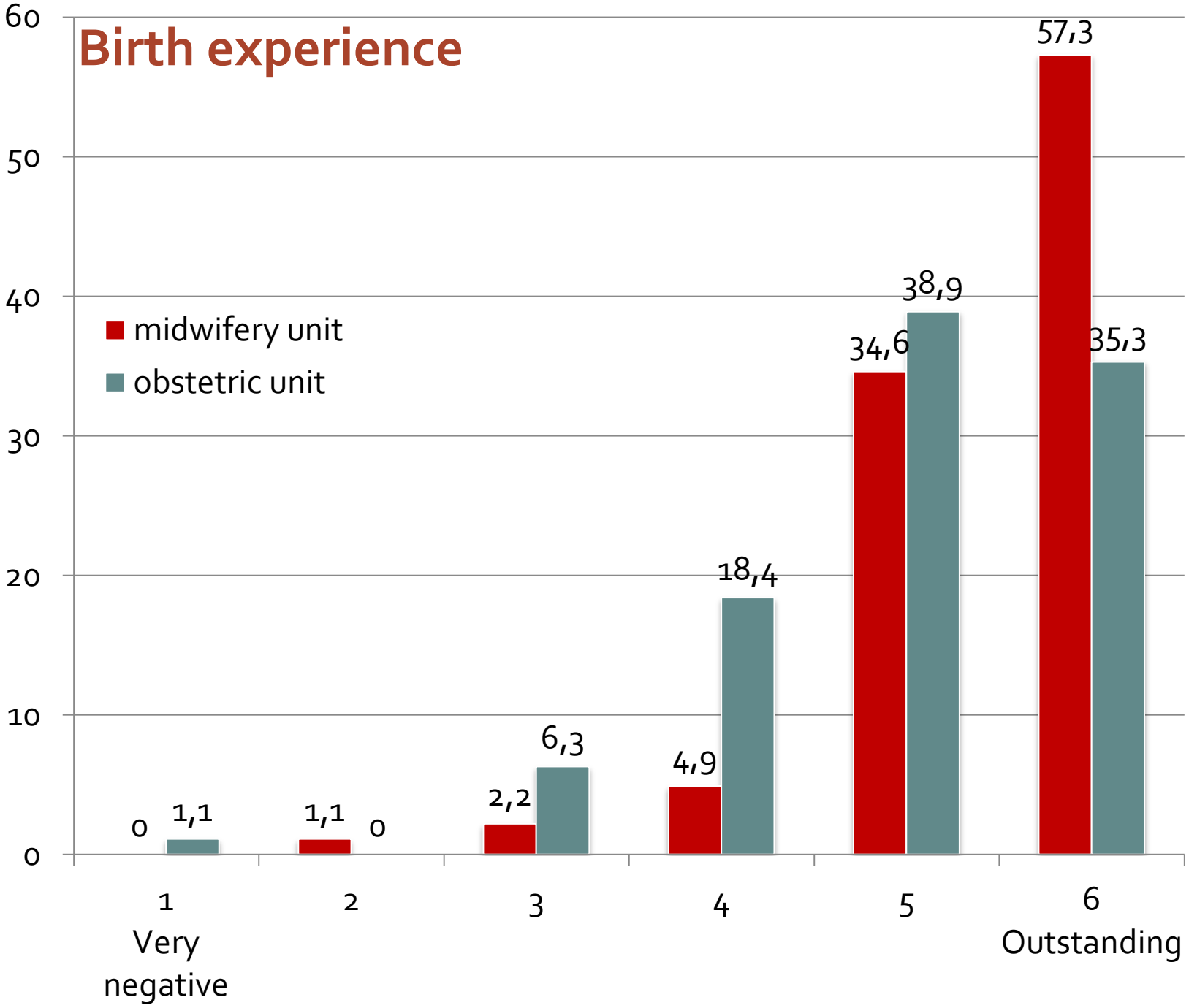
N of cases among the 839 controls from obstetric unit

For the midwifery units we also found:

- **Significant 40-60% reductions in all birth interventions**

And as show in many other studies of midwifery-led care and caseload midwifery:

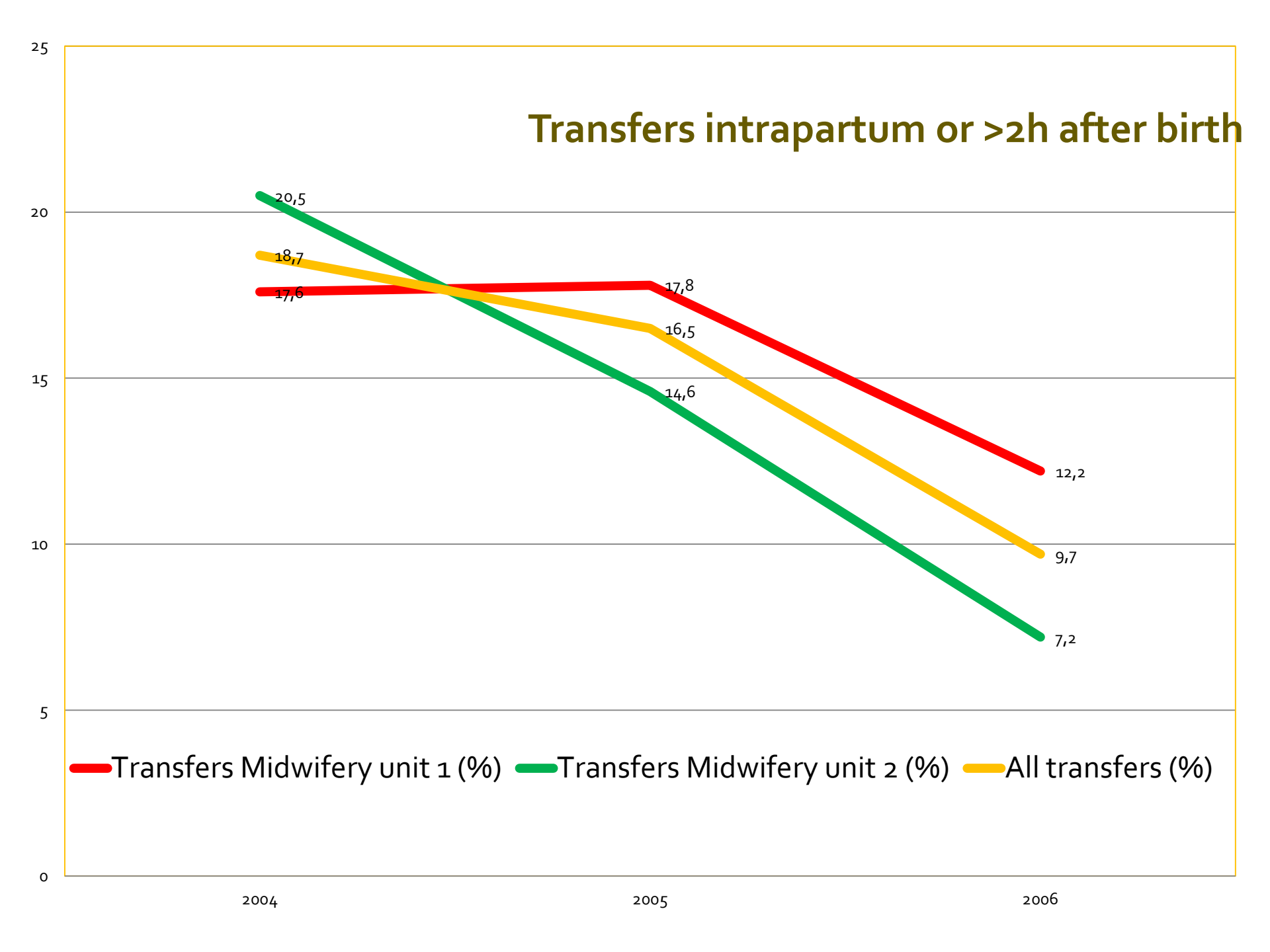
- **Significantly increased birth experience and care satisfaction**

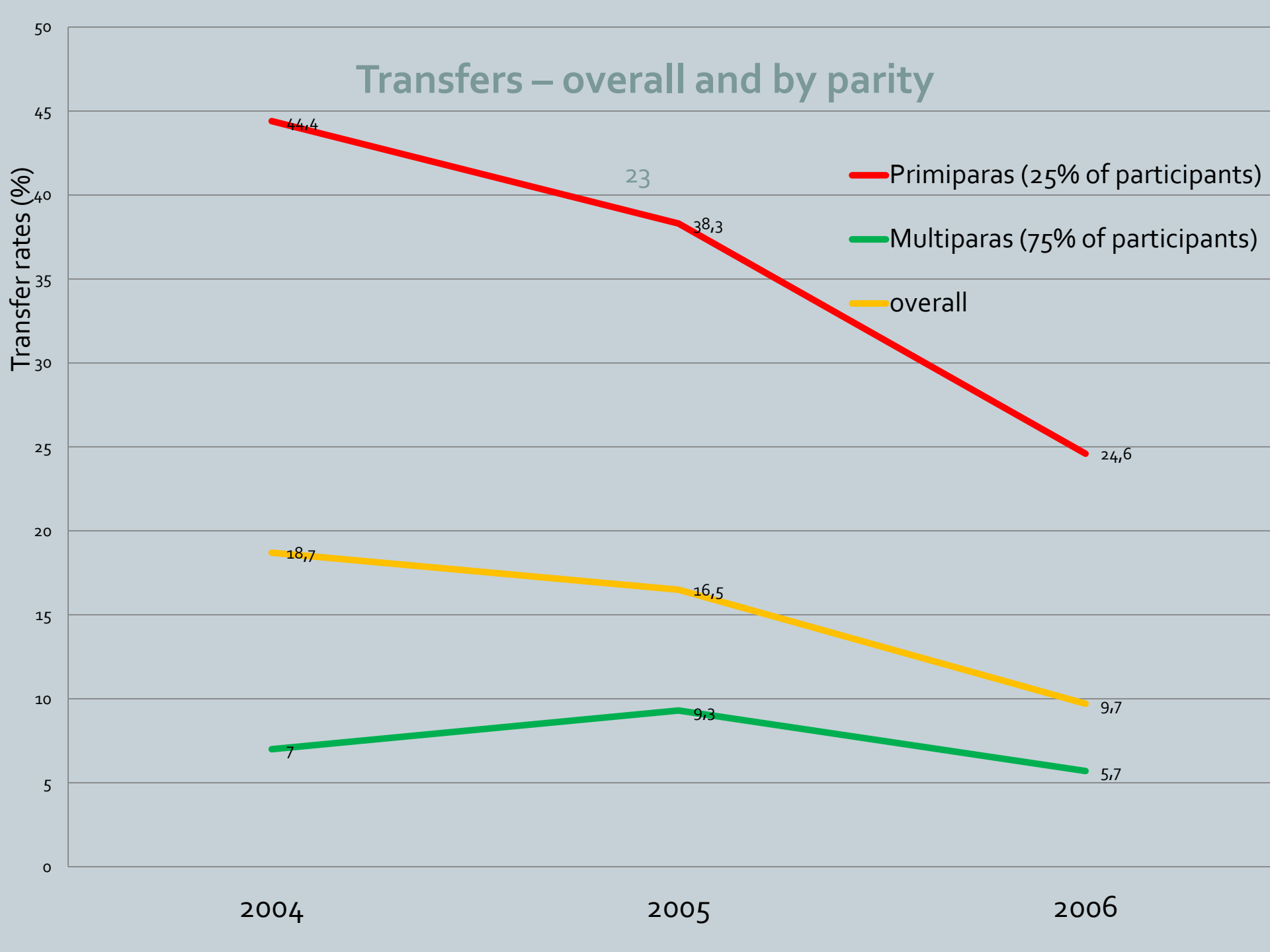

Birth experience
midwifery unit
obstetric unit
60
50
40
30
20
10
0
0
1,1
1,1
0
2,2
6,3
4,9
18,4
34,6
38,9
57,3
35,3
1
Very negative
2
3
4
5
6
Outstanding

Women's perception of patient-centered care elements

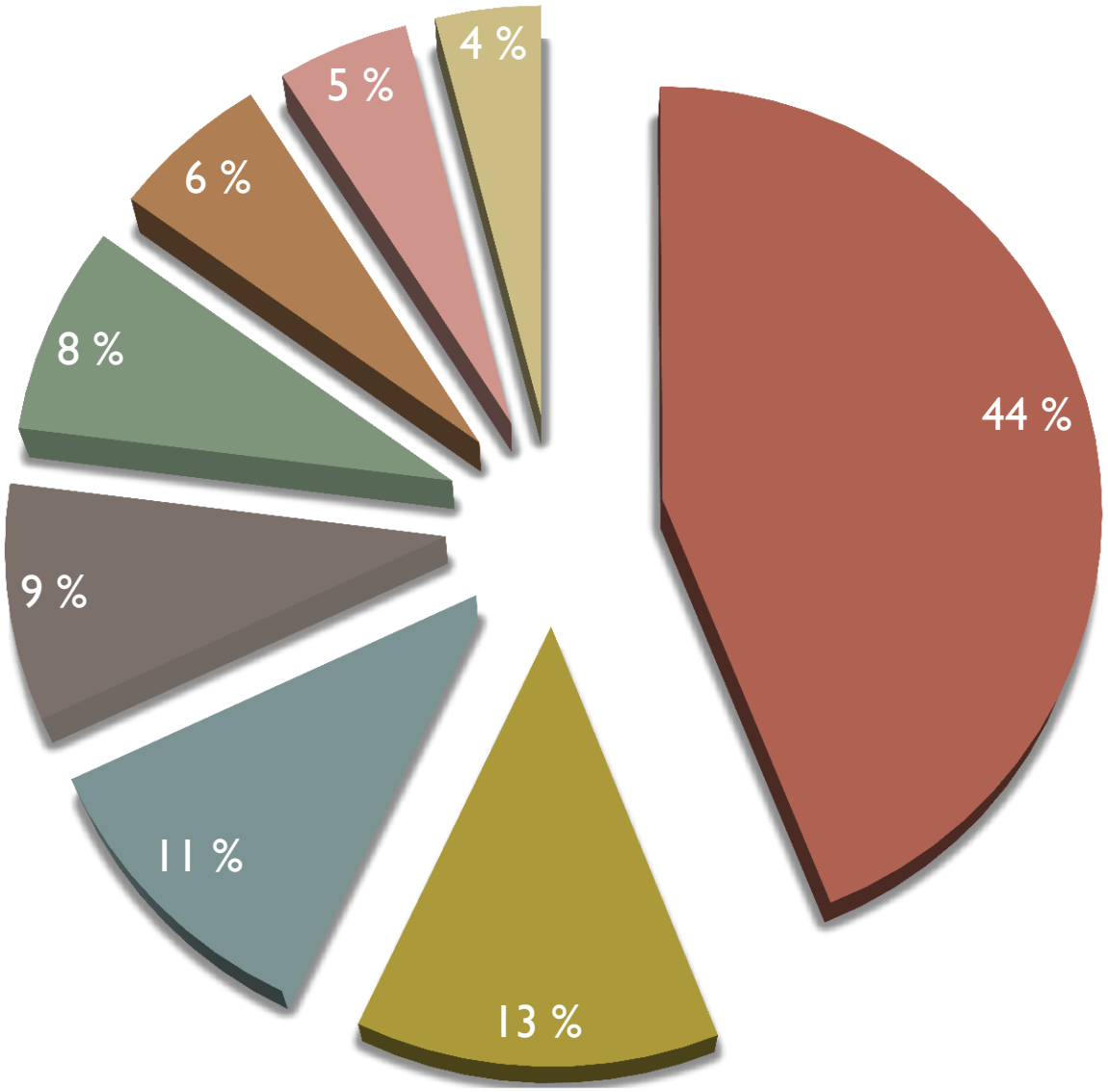
	FMU / OU Mean	P-value
Support from midwife	5.7 / 5.4	0.0000
Midwife present when wanted	5.7 / 5.4	0.0000
Feeling of being listened to	5.4 / 5.0	0.0000
Level of information	5.4 / 4.9	0.0000
Consideration for birth wishes	5.6 / 4.9	0.0000

Birth complications	Midwifery unit N (%)	Obstetric unit N (%)	RR	95% CI	P-value
Abnormal fetal heart rate:	34 (4.1)	98 (11.7)	**0.3**	0.2-0.5	0.0000
Baby not able to decent through pelvis	3 (0.4)	16 (1.9)	**0.2**	0.05-0.6	0.0044
Baby born in irregular head position:	13 (1.6)	28 (3.3)	**0.5**	0.3-0.9	0.0201
Shoulder dystocia (obstetric emergency):	3 (0.4)	12 (1.4)	**0.3**	0.5-0.9	0.0352


Transfers intrapartum or >2h after birth
25
20
15
10
5
0
20,5
18,7
17,6
17,8
16,5
14,6
12,2
9,7
7,2
2004
2005
2006
Transfers Midwifery unit 1 (%)
Transfers Midwifery unit 2 (%)
All transfers (%)


Transfers – overall and by parity
23
Transfer rates (%)
50
45
40
35
30
25
20
15
10
5
0
2004
2005
2006
44,4
38,3
24,6
18,7
16,5
9,7
7
9,3
5,7
Primiparas (25% of participants)
Multiparas (75% of participants)
overall

Reasons for transfer



- Slow progress (44%)
- Perineal tear (3th-4th degree/ complicated (13%)
- Meconium stained amniotic fluid (11%)
- Postpartum blood bleeding/ retained placente (9%)
- Fetal heart rate abnormality (8%)
- Prolonged latens phase(6%)
- Epidural analgesia (5%)
- Abnorm fetal presentation (4%)

Caseload midwifery in Denmark

Caseload midwifery makes a difference
– currently the care concept is:

- introduced small scale in almost all Danish obstetric units
- Introduced large scale in a few units (1/3 af women)
- **One** small obstetric unit is run exclusively by caseload group

Caseload midwifery may be introduced for several reasons:

- Professional: optimising care for all women, for special groups of high risk og vulnerable women or for getting first birth right
- Personal: midwives personally motivated, attracts midwives to the unit, stimulates the job environment, development of skills
- Economical: to attract patients in competition with other units – and sometimes to cut cost

Organisational study of the introduction of caseload midwifery in all obstetric units in a Danish region

- Design: case study (3 hospitals)

- Methods: 22 semi-structured, qualitative interviews

In each hospital:

Group interviews with:

2 or more caseload groups

3-4 ward midwives

Individual interviews with:

Chief midwife and deputy midwife

Obstetrician(s)

Health visitors/community nurses

Bureau and Overgaard 2015

In-creasing specia-lisation

Type of hospital	Scale of caseload midwifery	Target group of caseload midwifery
Highly specialised *university hospital* obstetric unit (4900 births) neonatal intensive care unit	**4** teams funded by reduced staffing of ward midwives	All women in a deprived, local area (1 team) First-time mothers + women who plan homebirth or early discharge after birth (3 teams)
Specialised mid-level hospital obstetric unit (2900 births) neonatal intensive care unit	**8** teams *(serving 1/3 of births in the unit)* funded by reduced staffing of ward midwives	First-time mothers (6 teams) Vulnerable and/or socially dis-advantaged mothers (1 team) Twin pregnancy or women with fear of childbirth (1 team)
Community hospital obstetric unit (1900 births) No neonatal intensive care unit	**2** teams pilot project funded by external resources	All women in specific geographical areas (2 teams)

A few key findings

Introduction of caseload activated new discussions

high quality care and not risk management came in focus

If well managed:

Introduction of caseload midwifery may potentially be the first step in the development of a explicit and shared philosophy of care in a unit

Management

- The change in working condition is huge - good management is crucial to support midwives in a coping with this change
- Control (from management) has to be replaced with trust and responsibility, self-confidence and self-management
- Interests of management and of caseload midwives may be conflicting:
  - Managers may want the highest possible caseload - caseload midwives want to deliver the highest possible level of continuity and quality of care
  - Managers focus on the unit as a whole - caseload midwives focus on needs of women and the demands and unpredictability of caseload work

Caseload midwives:

- become very dedicated to women in their caseload
- experience their work as rewarding, meaningful and of better quality
- may be confused between working as an independent professional (having her "own business") and being an employee who expect management to solve problems
- may burn out / get sick if:
  - the caseload is too big
  - they feel isolated and/or not well regarded

The relationship with other groups

If introduced in a ward with "permanent" staff levels:

- "ordinary" ward midwives may feel second best – or no good at all!

- Interests of labour ward midwives and caseload midwives may be conflicting
  - Ward midwives tend to focus on ensuring an even distribution of workload and "boring routine tasks"
  - Caseload midwives focus on "own" women in caseload and being ready for the next call (- and maybe to get a chance to rest)

Other professional groups may feel threatened by:

- Caseload midwives taking over their work
- The close relationship that develops between caseload midwives and women

Points for consideration in the reorganisation of birth services

- Introduction of freestanding midwifery units and caseload midwifery models holds great potential for improvement of health and well-being among low risk women

- Freestanding midwifery units is a safe, high quality care option for low risk women within a network of supporting obstetric units

BUT changes are deeply embedded in local context

– no solution fits all

Managers - but maybe even more- local health professionals and citizens and services users should be involved, listened to and considered as resources

Points for consideration in the reorganisation of birth services

Caseload midwifery does not fix everything. Forms of continuity are closely connected - aim for the highest possible level of all four forms:

1. Shared care philosophy among staff
2. Same midwife all through birth
3. Continuous support/one-to-one care all though labour
4. Known midwife: continuity of carer though pregnancy-birth-post partum

Caseload midwifery strongly affects the personal lives of midwives - only midwives who are motivated should enter

The chance of success is lower, if several changes in organisational structures occur simultaneously

- And even more in case of changes in professional competences and roles

Thank you for listening!

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References:

- Sandall J. Every woman needs a midwife, and some women need a doctor too.Birth. 2012 Dec;39(4):323-6. doi: 10.1111/birt.12010. Epub 2012 Nov 5

- Bureau V, Overgaard C. Caseload midwifery as organisational change: the interplay between professional and organisational projects in Denmark. BMC Pregnancy & Childbirth 2015, 15:121 doi:10.1186/s12884-015-0546-8.
  http://www.biomedcentral.com/content/pdf/s12884-015-0546-8.pdf

- Overgaard, C. Care closer to home – what does it offer? A study of safety and quality in freestanding midwifery units. PhD thesis. Faculty of Social Sciences, Aalborg University, June 2012.

- Overgaard C Fenger-Grøn M, Sandall J. The impact of birthplace on women's birth experiences and perceptions of care. Social Science & Medicine. doi:10.1016/j.socscimed.2011.12.023, 2012, s. 1-9

- Overgaard C, Møller AM, Fenger-Grøn M, Knudsen LB, Sandall J. Freestanding midwifery unit versus obstetric unit: a matched cohort study of outcomes in low-risk women. BMJ Open 2011; 1(2). Doi: 10.1136/bmjopen-2011-000262 . http://bmjopen.bmj.com/content/1/2/e000262.full