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

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

Midwifery unit
839 primary participants

124 (14.8 %) transferred during labour or <2 h post partum

13 (1.5 %) transferred during post partum stay

839 primary participants analysed

Inclusion at the start of care in labour

Obstetric unit
839 primary participants

Analysis by intention-to-treat

839 control participants analysed

13 (1.5 %) transferred during post partum stay

839 primary participants analysed
N of cases among the 839 participants from midwifery unit

N of cases among the 839 controls from obstetric unit

- Apgar score < 7/1 min
  - Cases: 22
  - Controls: 25
- Apgar score < 7/5 min
  - Cases: 5
  - Controls: 5
- NICU admissions
  - Cases: 28
  - Controls: 42
- NICU >48 h
  - Cases: 14
  - Controls: 15
- Re-admission (0-28 days)
  - Cases: 26
  - Controls: 35
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**

Very negative: 0, 1.1, 1.1, 2.2, 6.3, 2.2, 4.9, 18.4, 34.6, 38.9, 34.6, 35.3, 57.3

Outstanding: 57.3

Scores range from 0 (very negative) to 6 (outstanding).
<table>
<thead>
<tr>
<th>Women’s perception of patient-centered care elements</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>FMU / OU Mean</strong></td>
</tr>
<tr>
<td>---------------------</td>
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<tr>
<td><strong>Support from midwife</strong></td>
</tr>
<tr>
<td><strong>Midwife present when wanted</strong></td>
</tr>
<tr>
<td><strong>Feeling of being listened to</strong></td>
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<tr>
<td><strong>Level of information</strong></td>
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<tr>
<td><strong>Consideration for birth wishes</strong></td>
</tr>
<tr>
<td>Birth complications</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
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<tr>
<td>Abnormal fetal heart rate:</td>
</tr>
<tr>
<td>Baby not able to decent through pelvis</td>
</tr>
<tr>
<td>Baby born in irregular head position:</td>
</tr>
<tr>
<td>Shoulder dystocia (obstetric emergency):</td>
</tr>
</tbody>
</table>
Transfers intrapartum or >2h after birth

- Transfers Midwifery unit 1 (%)
- Transfers Midwifery unit 2 (%)
- All transfers (%)


Values: 20.5, 18.7, 17.6, 17.8, 16.5, 14.6, 12.2, 9.7, 7.2
Transfers – overall and by parity

- Primiparas (25% of participants)
- Multiparas (75% of participants)
- Overall
Reasons for transfer

- Slow progress (44%)
- Perineal tear (3rd-4th degree/complicated (13%)
- Meconium stained amniotic fluid (11%)
- Postpartum blood bleeding/retained placenta (9%)
- Fetal heart rate abnormality (8%)
- Prolonged latent phase (6%)
- Epidural analgesia (5%)
- Abnormal fetal presentation (4%)
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 of 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 or 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
<table>
<thead>
<tr>
<th>In-creasing specialisation</th>
<th>Type of hospital</th>
<th>Scale of caseload midwifery</th>
<th>Target group of caseload midwifery</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highly specialised university hospital obstetric unit (4900 births) neonatal intensive care unit</td>
<td>4 teams funded by reduced staffing of ward midwives</td>
<td>All women in a deprived, local area (1 team) First-time mothers + women who plan homebirth or early discharge after birth (3 teams)</td>
<td></td>
</tr>
<tr>
<td>Specialised mid-level hospital obstetric unit (2900 births) neonatal intensive care unit</td>
<td>8 teams <em>(serving 1/3 of births in the unit)</em> funded by reduced staffing of ward midwives</td>
<td>First-time mothers (6 teams) Vulnerable and/or socially disadvantaged mothers (1 team) Twin pregnancy or women with fear of childbirth (1 team)</td>
<td></td>
</tr>
<tr>
<td>Community hospital obstetric unit (1900 births) No neonatal intensive care unit</td>
<td>2 teams pilot project funded by external resources</td>
<td>All women in specific geographical areas (2 teams)</td>
<td></td>
</tr>
</tbody>
</table>
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 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:


