Humanisation and physiological birth; Impact on health and implications for practice

Professor Lesley Page CBE
Learning about the industrial model and the social model of midwifery 1960s Scotland
From medicalization to humanization

Humanization

Medicalization
### Medicalised or industrialised

- Depersonalised
- Birth seen as medical event
- Mother and baby separate
- Normal physiological is deviant
- Focus on pathology and risk, fear
- High intervention rates
- Focus on technology fragmented
- Eradication or limitation of midwifery
- Focus on acute care hospital

### Humanised

- Human rights respectful care
- Wider significance of birth recognised
- Secure attachment is critical
- Evidence based appropriate care
- Optimal health and wellbeing
- Intervention when indicated
- Recognises impact relationship
- Scaling up midwifery
- Prevention and public health community based
Fish can’t see the water (Wagner 2001)

- Humanized birth puts the woman in the center and in control, focuses on community based primary maternity care with midwives, nurses and doctors working together in harmony as equals, and has evidence-based services. Western, medicalized, high tech maternity care under obstetric control usually dehumanizes, often leads to unnecessary, costly, dangerous, invasive obstetric interventions and should never be exported to developing countries. Midwives and planned out-of-hospital births are perfectly safe for low-risk births.
Humanization of birth

• Care that recognizes the significance of birth for individuals family and society, and that respects human rights of the woman to access high quality, evidence based care. Humanised care puts the woman at the centre of care, recognizes that the mother and baby are inseparable. The woman and her baby and family are treated with dignity and respect, and the woman has the right to make decisions about her care. This decision making process will be enhanced by a relationship of reciprocity with her midwife or midwives, and supported through the appropriate provision of high quality information.

• Page 2016 and Umenai et al 2001
• In: Midwives and the humanisation of care. ICM. Page, LA, Cadee F, Rheyns M, Bondo, L, Debonnet S, Jokinen, M, Castiaux G on behalf of the Central European Region.
Human rights and birth

- The right to universal access to health care
- The right to high quality care
- Respectful care dignity Autonomy privacy and equality


- Respectful Maternity Care: The Universal Rights of Childbearing Women
Too little, too late; too much, too soon

“Every woman, every newborn, everywhere has the right to good quality care.”

**Too little, too late**
- Lack of evidence-based guidelines
- Lack of equipment, supplies, and medicines
- Inadequate numbers of skilled providers
- Women delivering alone
- Lack of emergency medical services and delayed interfacility referrals

**Too much, too soon**
- Unnecessary caesarean section
- Routine induced or augmented labour
- Routine continuous electronic fetal monitoring
- Routine episiotomy
- Routine antibiotics postpartum
FigO position paper: how to stop the caesarean section epidemic

Worldwide there is an alarming increase in caesarean section (CS) rates. The medical profession on its own cannot reverse this trend. Joint actions with governmental bodies, the health-care insurance industry, and women’s groups are urgently needed to stop and perhaps restructure the health-care network and provide perinatal consequences, including direct maternal morbidity and mortality derived from anaesthetic and surgical complications, bleeding, infection, and thromboembolism, with more respiratory problems in newborn babies because of iatrogenic prematurity.

Appropriate use of caesarean section globally requires a different approach

Increasing global rates of caesarean section are debated because of evidence that medically unnecessary caesarean sections appear associated with worse outcomes for mothers and their children. There is consensus that caesarean sections are overused in some countries and underused in others. As Ties Boerma and colleagues report in this Lancet Series on optimising caesarean section use, there are unacceptable disparities: caesarean section rates of 44% in Latin America and the Caribbean compared with 1.5% in Western and Central Africa. Challenges have arisen as low-income and middle-income countries attempt to rectify insufficient access to caesarean sections. The investment in workforce training and facilities to increase 12.9 million women from the USA, Ireland, and Australia showed that caesarean sections were more likely to be done for privately insured women than for women with public health insurance coverage. A perception that blames mothers for the high caesarean section rate, either because of their poor health (eg, obesity or hypertension) or because they are demanding medically unnecessary caesarean sections due to fear or distress in labour ignores the wider systemic issues that drive the growing reliance on caesarean sections.

Commitment to women-centred care is a key strategy to achieve equitable and optimal use of caesarean section. Women-centred care calls for a different approach to how today’s caesarean section epidemic continues. The present paper describes the trends, determinants of, and inequalities in caesarean section (CS) use, globally, regionally, and in selected countries. On the basis of data from 169 countries that include 98.4% of the world’s births, we estimate that 27.6 million (95% uncertainty interval 23.5–31.6) births occurred through CS in 2015, which was almost double the number of births in 2000 (15.9 million births). CS use in 2015 was up to ten times more frequent in the Latin America and Caribbean region, where it was used in 4.5% (4.1–4.9) of births, than in the east Asia and Central Africa regions, where it was used in 4.1% (3.9–4.4) of births. The global and regional increases in CS use were driven by an increasing proportion of births occurring in safe facilities accounting for 66–68% of the global increase and in CS use within health facilities (33–35%), with considerable variation between regions. Based on the most recent data available for each country, 17% of births in 2015 were performed by CS, whereas 68% (58%) of countries showed CS use in less than 10% of births. National CS use varied from 0.6% in South Sudan to 61% in the Dominican Republic. Within-country disparities in CS use were also very large: CS use was almost five times more frequent in births in the richest versus the poorest quintiles in low-income and middle-income countries; markedly CS use was observed among low socioeconomic births, especially among more educated women, in, for example, Brazil and China, and CS use was 1.6 times more frequent in private facilities than in public facilities.

Optimising caesarean section use 2

Short-term and long-term effects of caesarean section on the health of women and children

Jesse Bandell, Rochel M Tribe, Lisa Avery, Olivia Mills, Gerald Ha Vui, Caroline SF Turner, Dimeo Gliebov, Nicola Mc Harry, Holly Powell Kennedy, Husseini Aliatou, Paul Taylor, Mariam Tenorman

A caesarean section (CS) can be a life-saving intervention when medically indicated, but this procedure can also lead to short-term and long-term health effects for women and children. Given the increasing use of CS, particularly without medical indication, an increasing understanding of its effects on women and children has become crucial, which we discuss in this Series paper. The prevalence of maternal and neonatal morbidity and mortality is higher after CS than after vaginal birth. CS is associated with an increased risk of uterine rupture, abnormal placentaion, ectopic pregnancy, stillbirth, and preterm birth, and these risks increase in a dose-response manner. There is compelling evidence in evidence that babies born by CS have different hormonal, physical, biological, and medical exposures, and that these exposures can subtly alter neonatal physiology. Short-term risks of CS include altered immune development, an increased likelihood of allergies, atopy, and asthma, and reduced intestinal gut microbiota diversity. The persistence of these effects into later life is less well investigated, although an association between CS use and greater incidence of later childhood obesity and asthma are frequently reported. There is a focus of the effects of CS on cognitive and educational outcomes. Understanding potential mechanisms that link CS with childhood outcomes, such as neurodevelopmental outcomes, microchondria, potential to inform novel strategies and research for optimising CS use and promote optimal psychological processes.

Optimising caesarean section use 3

Interventions to reduce unnecessary caesarean sections in healthy women and babies

Auro Pilar Berde, Mariam Tennorman, Godel Kingdon, Abdul Mohaddis, Newton Opiey, Maria Regina Turkel, Jun Zhang, Othelian Munaro, Sicile Z Wangryal, Ahmed Met Elshabouri, Sook Deoura

Optimising the use of caesarean section (CS) is of global concern. Underuse leads to maternal and perinatal morbidity and mortality. Conversely, overuse of CS has not shown benefits and can cause harm. Worldwide, the frequency of CS continues to increase, and interventions to reduce unnecessary Cs have shown little success. Identifying the underlying factors for the continuing increase in CS use could improve the efficacy of interventions. In this Series paper, we describe the factors for CS use that are associated with women, families, health professionals, and health-care organisations and systems, and we examine biological, psychosocial, health system, and financial factors. We

Thanks Jane Sandall for slide
Background

Caesarean section—the most common surgery in many countries around the world—can save women’s and babies’ lives when complications occur during pregnancy or birth, and should be universally accessible. CS has increased over the past 30 years, without significant maternal or perinatal benefits. CS for non-medical reasons is a cause for concern because the procedure is associated with considerable short-term and long-term effects and health-care costs.

Slide Prof J Sandall
The global C-section rate has almost doubled in less than a generation, from 12 percent of all births in 2000 to 21 percent in 2015.
World regions with the highest, lowest C-section rates

Percent of births involving a C-section

<table>
<thead>
<tr>
<th>Region</th>
<th>2000</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global</td>
<td>12.1%</td>
<td>21.1%</td>
</tr>
<tr>
<td>West and Central Africa</td>
<td>3%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Eastern and Southern Africa</td>
<td>4.6%</td>
<td>6.2%</td>
</tr>
<tr>
<td>Middle East and North Africa</td>
<td>19%</td>
<td>29.6%</td>
</tr>
<tr>
<td>South Asia</td>
<td>7.2%</td>
<td>18.1%</td>
</tr>
<tr>
<td>East Asia and Pacific</td>
<td>13.4%</td>
<td>28.8%</td>
</tr>
<tr>
<td>Latin America and Caribbean</td>
<td>32.3%</td>
<td>44.3%</td>
</tr>
<tr>
<td>Eastern Europe and Central Asia</td>
<td>11.9%</td>
<td>27.3%</td>
</tr>
<tr>
<td>North America</td>
<td>24.3%</td>
<td>32%</td>
</tr>
<tr>
<td>Western Europe</td>
<td>19.6%</td>
<td>26.9%</td>
</tr>
</tbody>
</table>

Rates of births by C-section in 2015, stratified by region

Source: The Lancet, “Global epidemiology of use of and disparities in caesarean sections”, October 2018
Graphic: Will Houpi, CNN
Short- and long-term effects of Caesarean section on the health of women and children

CS is a life-saving intervention for complications during pregnancy and childbirth that should be available to all women in need. CS has an increased risk of maternal mortality, severe acute morbidity and adverse outcomes in subsequent pregnancy compared with vaginal birth. Multiple CSs are associated with a higher risk of maternal morbidity and mortality. Some benefits of CS, such as less frequent incontinence and urogenital prolapse have been described.

Short-term and long-term effects of caesarean section on the health of women and children

Gestational age is not always available leading to rise of iatrogenic preterm birth.
Infants born by CS have different hormonal, physical, bacterial, and medical exposures (such as intrapartum antibiotics and uterotonics) and are exposed to more short-term risks, such as altered immune development, allergy, atopy, asthma, and reduced diversity of the intestinal gut microbiome, compared with those born vaginally.
Emerging research has shown biological mechanisms that underlie the acute and chronic effects of CS on child health and the long-term effects of CS on children, including how these effects might be mitigated.

WHO recommendations for non-clinical interventions to reduce unnecessary caesarean sections
Humanised approaches
Slide by Dr Liz Newnham
Paradox of the institution: findings from a hospital labour ward ethnography

Elizabeth C. Newnham, Lois V. McKellar, Jan P. Pincombe

University of South Australia, School of Nursing and Midwifery, GPO Box 247L, Adelaide, South Australia 5001, Australia
Study Design: A Critical analytic model of childbirth practices


Slide by Dr Liz Newnham
The wide world: understand the impact of wider politics

- Inequality
- Ethnicity
- Geography
- Gender and violence
- Indigenous women
- Migration
- Detention
- Warfare
- Humanitarian disasters
- Commercialization
- Health Services
- Mental health

Medicalisation
Care of women from vulnerable groups

Sara Kenyon
“Pregnant women who experience a distance in accessing maternal healthcare, as refugees/migrants/ethnic minorities/second or third generation immigrants, due to problems in speaking the language and/or understanding the culture, and/or due to lack of income, housing or social support”

Women Political Leaders Global Forum 2018
The women who died 2014-16

In 2014-16 9.8 women per 100,000 died during pregnancy or up to six weeks after childbirth or the end of pregnancy.

Most women who died had multiple health problems or other vulnerabilities.
Other characteristics of women who died

- Black and Asian women have a higher risk of dying in pregnancy
  - White women: 8/100,000
  - Asian women: 2x 15/100,000
  - Black women: 5x 40/100,000

- In deprived areas women are at greater risk of dying
  - Least deprived: 3/100,000
  - Most deprived: 3x 11/100,000

- Older women are at greater risk of dying
  - Aged 20-24: 7/100,000
  - Aged 35-39: 2x 14/100,000
  - Aged 40 or over: 3x 22/100,000

- Women born outside the UK have the same risk of dying in pregnancy
  - UK born: 8/100,000
  - Non-UK born: 1x 9/100,000
Other characteristics of women who died

<table>
<thead>
<tr>
<th>Socio-demographic characteristic</th>
<th>Direct (n=98) Frequency (%)</th>
<th>Indirect (n=127) Frequency (%)</th>
<th>Total (n=225) Frequency (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic abuse (prior/during pregnancy)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>10 (10)</td>
<td>8 (6)</td>
<td>18 (8)</td>
</tr>
<tr>
<td>No</td>
<td>52 (53)</td>
<td>73 (57)</td>
<td>125 (56)</td>
</tr>
<tr>
<td>Missing</td>
<td>36 (37)</td>
<td>46 (36)</td>
<td>82 (36)</td>
</tr>
<tr>
<td>Known to social services</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>16 (16)</td>
<td>21 (17)</td>
<td>37 (16)</td>
</tr>
<tr>
<td>No</td>
<td>78 (80)</td>
<td>101 (80)</td>
<td>179 (80)</td>
</tr>
<tr>
<td>Missing</td>
<td>4 (4)</td>
<td>5 (4)</td>
<td>9 (4)</td>
</tr>
</tbody>
</table>
Other characteristics of women who died

- Of the 24 women who were not UK citizens and were born outside the UK
  - 3 (13%) were refugees/asylum seekers
  - 6 (25%) were recently arrived wives of UK residents
  - 6 (25%) were EU citizens
  - 9 (38%) had another or unknown status
Recognising emerging science

The Hormone of Closeness
The role of oxytocin in relationships
Kerstin Unvås Moberg

Squaring the Circle
Researching normal birth in a technological world

The Microbiome Effect
How your baby's birth affects their future health
Toni Harman & Alex Wakeford
The long term impact of how we are born and give birth is mounting
Problems with the evidence

- Almost no studies have focused on the nature of and impact of physiological birthing in well women and babies
- Overt confounders in obstetric unit care: how normal is normal?

Slide Prof H Dahlen
Epigenetics

Heritable changes in gene expression without alteration to the underlying DNA sequence

Slide Prof H Dahlen
• The EPIgenetic Impact of Childbirth (EPIIC) hypothesis is concerned with the effects of stress (too high and too low) caused by medical and operative birth interventions to the epigenetic regulation of gene expression in the immune system.

• Extended Hygiene Hypothesis (EHH) implies that babies born by caesarean section have different colonisation of the gut flora compared with babies born by vaginal birth.


Babies born particularly by pre-labour caesarean section appear to have a subtly different physiology from those born by normal vaginal delivery.

Both acute and chronic complications such as respiratory and cardio-metabolic morbidities apparent.

Labour and birth may trigger protective developmental processes.

Hormonal surges, stress response.

Transfer of maternal microbiome.

Transmission of disease traits through epigenetics.

Impact on future health of the neonate (Tribe Taylor et al 2018)
Giving the best start in life—what matters?
Being with woman

With thanks to Sadie Holland, King's College London
'A woman's relationship with her maternity providers is vitally important. Not only are these encounters the vehicle for essential lifesaving health services, but women's experiences with caregivers can empower and comfort or inflict lasting damage and emotional trauma.'

White Ribbon Alliance, Respectful Maternity Care, 2011
Midwife led continuity model vs other models of care (Sandall et al 2016 Cochrane review)

- Small team or caseloading vs standard care
- 15 Randomised controlled trials with 17,647 women
- Australia, Canada, Ireland and UK
- 1989 – 2013
- Low and mixed risk women
Outcomes and experiences

Women who received models of midwife-led continuity of care

- 7x more likely to be attended at birth by a known midwife
- 16% less likely to lose their baby
- 19% less likely to lose their baby before 24 weeks
- 15% less likely to have regional analgesia
- 24% less likely to experience pre-term birth
- 16% less likely to have an episiotomy
Outcomes

Women randomised to midwife-led continuity models of care

On Average Less Likely to Experience

Morbidity & Mortality
- Preterm Birth
- Less Overall Fetal Death
- Fetal Loss/Neonatal Death Before 24 Weeks

Intervention
- Instrumental Vaginal Birth
- Regional Analgesia
- Amniotomy
- Episiotomy
Women's experience

Women attended at birth by a known midwife reported higher ratings of maternal satisfaction with...

Information
Advice & Explanation
Place of Birth

Preparation for Labour and Birth
Choice for Pain Relief
Feeling in Control
Relational Continuity: benefits for women

- Having an advocate (somebody who speaks up for you)
- Having somebody to navigate complex care
- Having one clinician to ensure timely decisions are made in your best interests
Oxytocin and social affiliation in humans (Feldman R 2012)

• “It is in childhood that we learn to love (Bowlby 1958)

• Affiliative bonds—a close interpersonal bond—

• The primary role of love for survival, safety and wellbeing of the young (Bowlby, Harlow and Spitz)

• Care around birth makes critical contribution to this bond

• (Feldman R 2012 Hormones and behaviour 61 (2012) 380-391)
Supporting secure attachment

Essential to survival and wellbeing of baby into adulthood

Support for physiology important to health and wellbeing mother/baby

See Dr Sarah Buckley’s work

What women want and need to achieve a positive pregnancy (birth) experience

- **Support**
  - social, cultural, emotional and psychological

- **Relevant and timely information**
  - physiological, biomedical, behavioural, sociocultural

- **Clinical care/therapeutic practices**
  - biomedical interventions and tests, integrated with therapeutic spiritual and religious practices, where appropriate
What matters to women about childbirth
BOTH safety AND wellbeing
(Downe et al 2018)

• Metasynthesis: 35 studies, 19 countries, moderate to high confidence

• What matters to most women is a positive experience that fulfils or exceeds their prior personal and socio-cultural beliefs and expectations.

• This includes:
  • giving birth to a healthy baby in a clinically and psychologically safe environment
  • practical and emotional support from birth companions, and competent, reassuring, kind clinical staff.
  • a physiological labour and birth, though the need to ‘go with the flow’ was acknowledged
<table>
<thead>
<tr>
<th>Effective practices</th>
<th>Education, information, health promotion</th>
<th>Assessment, screening, care planning</th>
<th>Promotion of normal processes, prevention of complications</th>
<th>First-line management of complications</th>
<th>Medical obstetric neonatal services</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisation of care</td>
<td>Available, accessible, acceptable, good quality services – adequate resources, competent workforce</td>
<td>Continuity, services integrated across community and facilities</td>
<td></td>
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</tr>
<tr>
<td>Values</td>
<td>Respect, communication, community knowledge and understanding</td>
<td>Care tailored to women’s circumstances and needs</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>Philosophy</td>
<td>Optimising biological, psychological, social and cultural processes, strengthening women’s capabilities.</td>
<td>Expectant management, using interventions only when indicated</td>
<td></td>
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</tr>
<tr>
<td>Care providers</td>
<td>Practitioners who combine clinical knowledge and skills with interpersonal and cultural knowledge</td>
<td>Division of roles based on need, competencies and resources</td>
<td></td>
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</tr>
</tbody>
</table>

Renfrew, McFadden, Bastos et al The Lancet 384, I9948, 1129 – 1145, 2014
Systems and culture change—woman centred care

Reduce and contain fear and anxiety

Comfort

Keep warm

Reduce disturbance of physiology as much as possible

Ie: reduce unnecessary intervention

Induction, epidural, caesarean section, fear
The birth of the baby is the birth of the world and our future humanity

With thanks Jessamy Nick and Toran.
Photo by Nick Yates
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