



**NJF CONGRESS**  
HELSINKI 2022

# **ABSTRACT BOOK**

*Midwives promoting  
sexual and reproductive  
health and rights*



**Nordic Midwifery Congress 2022**

**4-6 May, 2022 · Helsinki, Finland**

## **Midwives promoting sexual and reproductive health and rights**

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4–6 May, 2022 Helsinki, Finland

ABSTRACT BOOK

**Editors:** Hanna-Leena Melender, Päivi Oinonen, Anna-Kaisa Kokkonen & Katriina Bildjuschkin

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## **The Planning Committee for the Nordic Midwifery Congress**

The Presidents of the Federation of Finnish Midwives

The Members of the Executive Board of the Federation of Finnish Midwives

The Members of the Educational Board of the Federation of Finnish Midwives

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# WELCOME

The Federation of Finnish Midwives warmly welcomes you to the Nordic Midwifery Congress 2022. The theme of the congress, *“Midwives promoting sexual and reproductive health and rights”*, reflects the broad scope of the work of midwives. We received almost 200 abstracts whose topics cover this broad scope very well. We wish to thank all the presenters who submitted their abstracts to build the program for this congress. We also wish to thank our invited keynote speakers for accepting our invitation and making a keynote lecture in the congress as well as the invited speakers of the Opening Ceremony and the Closing Ceremony for their speeches.

Organizing a congress demands a lot of work. We wish to thank all the volunteers who have participated in this work in many different ways. Without your contribution, organizing this congress would not have been possible.

We hope that all the participants of the congress will find the program inspiring and meaningful for the development of midwifery, from the point of view of practical work, research, teaching and leadership. We also hope that you share knowledge, learn from each other, network and have fun together!

Best regards

*The Planning Committee for the Nordic Midwifery Congress*



# GENERAL INFORMATION

## Venue

### Scandic Marina Congress Center

The NJF 2022 Congress is held in the **Scandic Marina Congress Center** located at the center of Helsinki. Congress Center offers functional and versatile event space with a beautiful view to Baltic Sea and Helsinki.

**Address:** Katajanokanlaituri 6, 00160 Helsinki

**Map:** [Scandic Marina Congress Center](#)

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Marina Congress Center provides a public WLAN connection free of charge. The speed of the function depends on the number of users at the same time. You can log in to Scandic Easy net with your name and telephone number.

## Badges and registration

While arriving to the event place for the first time a badge will be given to the participants. Your personal badge is your entrance ticket to all sessions. Please remember to wear your badge at all times.

If you have registered as a student, please be prepared to show your student ID at the registration desk.

## Helsinki info

### My Helsinki

([www.myhelsinki.fi/your-local-guide-to-helsinki](http://www.myhelsinki.fi/your-local-guide-to-helsinki))

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connects you with Helsinki and helps you explore Helsinki like a local. Whether you are looking for a dinner restaurant or activities for your spare time, My Helsinki is the place to look.



## Taxi

If you want to explore Helsinki by taxi, we recommend **Taksi Helsinki** which is Finland's Largest Taxi Dispatch Company. Phone number: +358 (0)100 0700

## HSL Helsinki Region Transport – hsl.fi

The **HSL app** allows you to easily find tickets and routes. Buy single, day or season tickets wherever and whenever you want and conveniently pay with your debit/credit card. The HSL app is available on apps store for free. Download from AppStore, GooglePlay or AppGallery.

You can also buy tickets, for example, in some shops. For more information, please see [www.hsl.fi/en/customer-service/sales-and-service-points?display=map&service=all](http://www.hsl.fi/en/customer-service/sales-and-service-points?display=map&service=all).

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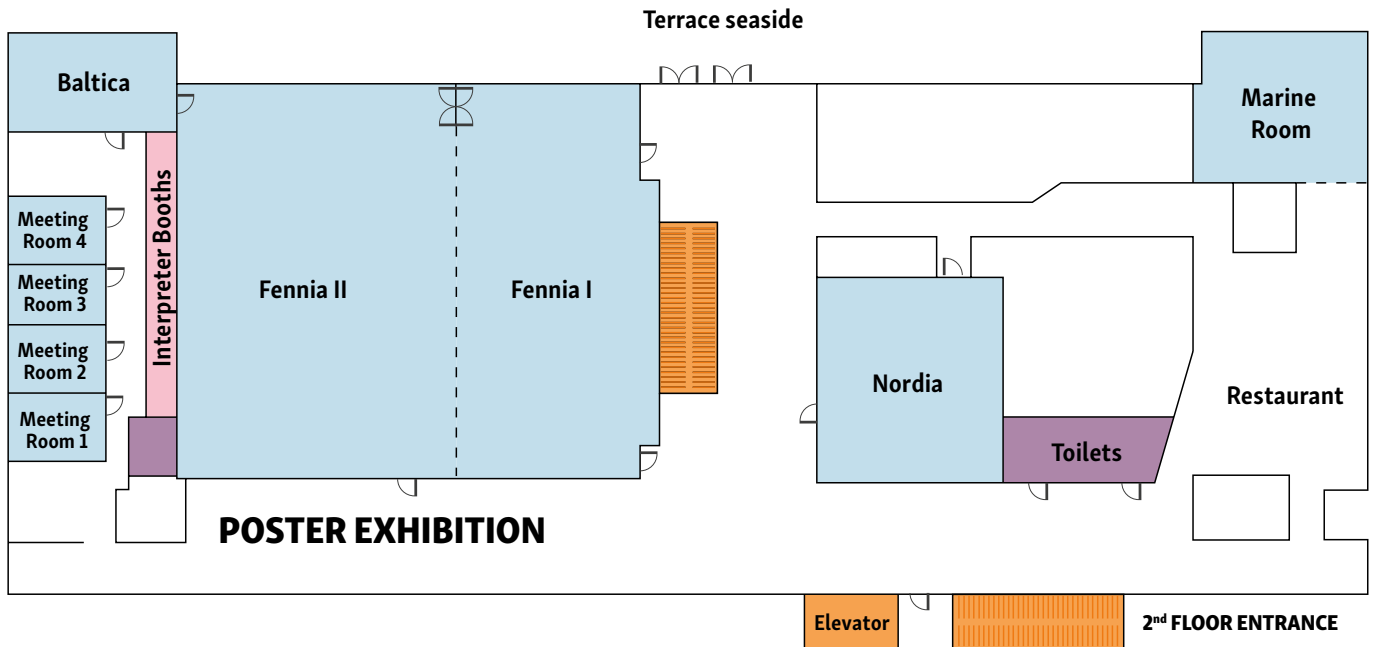
© [OpenStreetMap](#)). The shop selling tickets which is nearest to the Marina Congress Center is **K-Market Katajanokka** (Satamakatu 3).



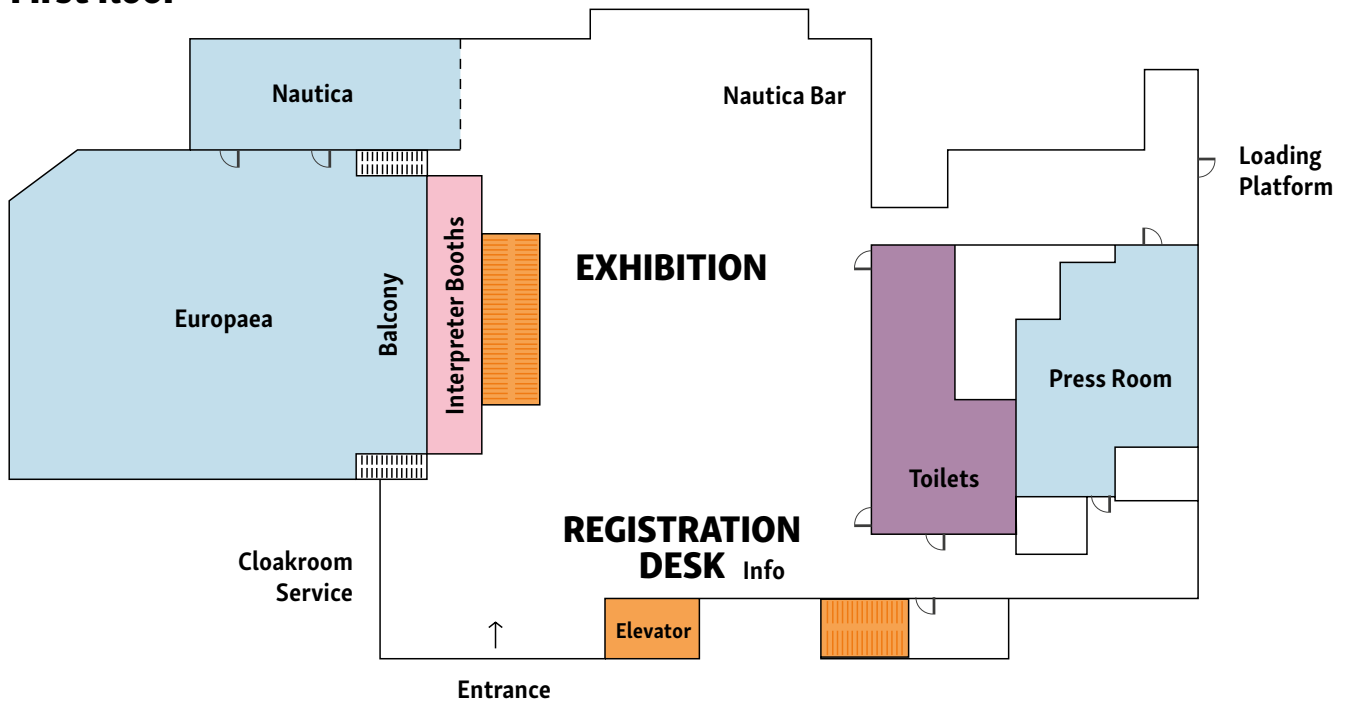
# FLOOR PLAN

## Second floor

VIEW TO WATERFRONT



## First floor



# SOCIAL EVENTS

## Welcome reception

**Date:** Wednesday 4th May

**Time:** 18:30–20:00

**Place:** Helsinki City Hall, at Banquet Hall

**Address:** Pohjoisesplanadi 11–13, 00170 Helsinki

**Map:** [Helsinki City Hall](#)

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The Mayor of Helsinki City welcomes the congress participants to the reception at the City Hall. City Hall is located by market square in Helsinki center less than 1 km away from the Congress Center. All congress participants have received an invitation with a registration link via email. Please register for this event latest one week before in case you will participate. When you arrive in the event, you need to show either the invitation or your badge to be identified as a congress participant.



## Congress Dinner at Restaurant Bank

**Date:** Thursday 5th May

**Time:** 19:30–22:30

**Place:** Restaurant Bank

**Address:** Unioninkatu 20, 00130 Helsinki

**Map:** [Event Arena Bank](#)

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The Congress Dinner is held at the Restaurant Bank located just 1 km away from the Congress Center in the center of Helsinki. The theme of the Gala Dinner is sea. The Gala Dinner package includes a three course dinner, an aperitif, a glass of wine and a gala program.



Helsinki City Hall





# THE CONGRESS PROGRAM OVERVIEW

When you use this book in its electronic form, you can find the responding abstract (keynotes) by clicking the **number** of the presentation.

## Wednesday 4th May

9.00–16.00	Registration
10.30–12.00	Lunch, exhibition and poster viewing (the poster presentations are presented in a separate program)
12.00–13.00	<b>Opening Ceremony</b> <b>Room:</b> Europaea <b>Moderator:</b> Päivi Oinonen 12.00–12.10 Music 12.10–12.15 Päivi Oinonen, President of the Federation of Finnish Midwives 12.15–12.25 Franka Cadée, President of the International Confederation of Midwives 12.25–12.30 Hanna-Leena Melender, Chair of the Scientific Committee of the Congress 12.30–12.35 Anna-Kaisa Kokkonen, Vice President of the Federation of Finnish Midwives 12.35–12.40 Nasima Razmyar, Deputy Mayor for Education, City of Helsinki 12.40–12.50 Kristiina Poikajärvi, Director of the Regional State Administrative Agency for South Finland 12.50–13.00 Music
13.00–13.10	Gym break
13.10–13.55	<b>★ Keynote K1</b> <b>Frances McConville: MIDWIFERY – A VISION FOR 2022–2030</b> <b>Room:</b> Europaea <b>Moderator:</b> Päivi Oinonen
13.55–14.25	Coffee and tea, exhibition and poster viewing (the poster presentations are presented in a separate program)
14.25–15.10	<b>★ Keynote K2</b> <b>Hannakaisa Niela-Vilén: DIGITALISATION AND MIDWIFERY</b> <b>Room:</b> Europaea <b>Moderator:</b> Päivi Oinonen
15.10–15.20	Short break
15.20–16.30	<b>Parallel sessions 1–5</b> (the sessions are presented in a separate program)
16.30–16.45	Short break

16.45–18.00

### Share Best practice – The Midwives role during induction

A symposium organized by Norgine

**Room:** Nautica

**Moderator:** Mariette Pontán

- Country statistics: birth, induction, guidelines
- Patient information pre-induction
- Teamwork and routines
- What can we learn from each other?
- Discussion forum

An enrollment beforehand via the website of the Congress is required, latest on the 25<sup>th</sup> April.

Enroll here: [https://www.lyyti.fi/reg/registration\\_extraevents](https://www.lyyti.fi/reg/registration_extraevents)

**Enroll here:**



18.30–20.00

### Reception hosted by the City of Helsinki

All congress participants have received an invitation with a registration link via email. Please, register for this event latest one week before in case you will participate. When you arrive in the event, you need to show either the invitation or your badge to be identified as a congress participant.

## Thursday 5th May

8.00–16.00

Registration

8.30–10.20

**Parallel sessions 6–10** (the sessions are presented in a separate program)

10.20–10.50

Coffee and tea, exhibition and poster viewing  
(the poster presentations are presented in a separate program)

10.50–11.35

### ★ Keynote K3

**Mika Gissler: NORDIC REGISTERS FOR SEXUAL AND REPRODUCTIVE HEALTH – THE SIGNIFICANCE OF CLOSE COOPERATION**

**Room:** Europaea

**Moderator:** Katriina Bildjuschkin

11.35–11.45

### **Award for the Midwife of the Year in Finland**

**Room:** Europaea

**Moderator:** Katriina Bildjuschkin

11.45–13.05

Lunch, exhibition and poster viewing  
(the poster presentations are presented in a separate program)

13.05–13.50

### ★ Keynote K4

**Sari Räisänen: BIRTH REGISTER RESEARCH – AN OPPORTUNITY TO GAIN EVIDENCE ON MIDWIFERY**

**Room:** Europaea

**Moderator:** Katriina Bildjuschkin

13.50–14.00	Short break
14.00–15.10	<b>Parallel sessions 11–15</b> (the sessions are presented in a separate program)
15.10–15.40	Coffee and tea, exhibition and poster viewing (the poster presentations are presented in a separate program)
15.40–16.50	<b>Parallel sessions 16–20 and a workshop on midwifery caseload model of care</b> (the sessions and more information on the participation in the workshop are presented in a separate program)
19.30–22.30	<b>Conference Dinner</b>

## Friday 6th May

8.00–11.00	Registration
8.30–10.20	<b>Parallel sessions or a symposium 21–25</b> (the sessions/symposium are presented in a separate program)
10.20–10.50	Coffee and tea, exhibition and poster viewing (the poster presentations are presented in a separate program)
10.50–11.35	<p>★ <b>Keynote K5</b>  <b>Leena Hannula: CULTURAL AND SOCIETAL ASPECTS OF BREASTFEEDING</b>  <b>Room:</b> Europaea  <b>Moderator:</b> Mariette Pontán</p>
11.45–13.05	Lunch, exhibition and poster viewing (the poster presentations are presented in a separate program)
13.05–14.35	<b>Parallel sessions 26–29 and a workshop on contraception and contraceptive counselling</b> (the sessions and more information on the participation in the workshop are presented in a separate program)
14.35–14.45	Short break
14.45–15.30	<p><b>Closing Ceremony</b>  <b>Room:</b> Europaea  <b>Moderator:</b> Mariette Pontán</p> <p>14.45–14.55 Lillian Bondo, the President of the NJF  14.55–15.05 Päivi Oinonen, Anna-Kaisa Kokkonen and Hanna-Leena Melender, the Federation of Finnish Midwives  15.05–15.15 Lis Munk, the President of the Danish Association of Midwives  15.15–15.30 Music  Goodbye and Safe Travels!</p>

# PARALLEL SESSIONS

When you use this book in its electronic form, you can find the responding abstract by clicking the **number** of the presentation. To get back to the program, you can click **the button** which is placed beside the text of the abstract.

## Parallel sessions 1–5

### Wednesday 4th May at 15.20–16.30

#### Parallel session 1: Digital methods in the work of midwives

Room: Nordia (2<sup>nd</sup> floor)

Moderator: Hannakaisa Niela-Vilén

15.20–15.40

**01**

**CANCELLED**

15.40–16.00

**02**

**EXPERIENCES OF PRIMIPARAS USING THE MOBILE INTERVENTION IN BREASTFEEDING COUNSELLING**

Pirkko Nikula, Outi Kanste & Tarja Pölkki

16.00–16.20

**03**

**THE EFFECTIVENESS OF FEX-CAN SEX, A WEB-BASED INTERVENTION TO REDUCE SEXUAL DYSFUNCTION IN CHILDHOOD CANCER SURVIVORS: A RANDOMIZED CONTROLLED TRIAL**

Kristina Fagerkvist, Claudia Lampic & Lena Wettergren

16.20–16.30

Closing of the parallel session

#### Parallel session 2: Normal birth

Room: Europaea (1<sup>st</sup> floor)

Moderator: Pernilla Stenbäck

15.20–15.40

**04**

**FREQUENCY OF NORMAL BIRTH AT THE NATIONAL UNIVERSITY HOSPITAL OF ICELAND BEFORE AND AFTER MERGING OF MATERNITY WARDS: A RETROSPECTIVE COHORT STUDY**

Sigurveig Ósk Pálsdóttir, Berglind Hálfhánsdóttir & Ólöf Ásta Ólafsdóttir

15.40–16.00

**05**

**MIDWIVES' THOUGHTS ABOUT WHAT THEY CONSIDER NORMAL BIRTH AND HOW THEY WORK TO PROTECT NORMAL BIRTH**

Pernilla Stenbäck, Terese Österberg, Ilze Ansule, Alina Liepinaitienė, Kirsten Hasman, Maria Ekelin, Olof Asta Olafsdottir & Eline Skirnisdottir Vik

16.00–16.20

**06**

**THE BIRTHING ROOM AND ITS INFLUENCE ON THE MIDWIVES' PROMOTION OF A NORMAL PHYSIOLOGICAL CHILDBIRTH – A QUALITATIVE INTERVIEW STUDY IN SWEDEN**

Anna Andrén, Cecily Begley, Helena Dahlberg & Marie Berg

16.20–16.30

Closing of the parallel session

### Parallel session 3: Existential aspects in the transition to parenthood

Room: Nautica (1<sup>st</sup> floor)

Moderator: Pia Liljeroth

15.20–15.40	<b>07</b>	<b>TO ME IT IS NO. 42! EXISTENTIAL ASPECTS IN MOTHER- AND FATHERHOOD TRANSITION BASED ON INTERVIEWS AND A THEATRE WORKSHOP</b> Christina Prinds, Dorte Toudal Viftrup, Connie Timmerman, Jette Ammentorp, Niels Christian Hvidt, Henry Larsen & Dorte Hvidtjørn
15.40–16.00	<b>08</b>	<b>CONTINUING BONDS IN BEREAVED PARENTS AFTER LOSS IN PREGNANCY, STILLBIRTH OR NEONATAL DEATH</b> Maria Birkegård Brintow, Christina Prinds & Dorte Hvidtjørn
16.00–16.20	<b>09</b>	<b>MIDWIVES SUPPORTING BEREAVED PARENTS IN A SPECIALIZED UNIT</b> Dorte Hvidtjørn, Sofie Mørk, Mette Eklund, Rikke Damkjær Maimburg & Tine Brink Henriksen
16.20–16.30		Closing of the parallel session

### Parallel session 4: Caring for vulnerable women 1

Room: Fennia 1 (2<sup>nd</sup> floor)

Moderator: Sari Haapio

15.20–15.40	<b>010</b>	<b>PEER SUPPORT PROGRAM FOR MOTHERS WITH DISABILITIES: EDUCATING PEER SUPPORT MOTHERS TO SUPPORT THE NEEDS OF NEW MOTHERS WITH DISABILITIES</b> Anni Täckman & Jaana Tiiri
15.40–16.00	<b>011</b>	<b>SOCIODEMOGRAPHIC FACTORS AFFECTING RESPECTFUL CARE, AUTONOMY, MISTREATMENT AND CHILDBIRTH EXPERIENCE</b> Edythe L. Mangindin, Helga Gottfreðsdóttir, Kathrin Stoll, Franka Cadée & Emma M. Swift
16.00–16.20	<b>012</b>	<b>CANCELLED</b>
16.20–16.30		Closing of the parallel session

### Parallel session 5: Postnatal care 1

Room: Fennia 2 (2<sup>nd</sup> floor)

Moderator: Heli Mäkelä

15.20–15.40	<b>013</b>	<b>WOMAN'S POSTNATAL CARING EXPERIENCES AFTER AN EMERGENCY SECTION- A QUALITATIVE STUDY</b> Monica Nilsen Mørch, Eva Sommerseth & Bente Dahl
15.40–16.00	<b>014</b>	<b>THE EXPERIENCE AND NEEDS OF PUERPERAL WOMEN WHO HAVE HAD A CHILD AFTER FOLLOWING ASSISTED REPRODUCTIVE TECHNOLOGIES (ART); A QUALITATIVE STUDY</b> Catja Warmelink, Carolien de Boer, Leonie Brandes, Anne Tempelman & Willemijn Warmink-Perdijk
16.00–16.20	<b>015</b>	<b>LEARNING TO BREASTFEED DURING A PANDEMIC</b> Ann Helen Høghjelle Stette, Cathrine Thorsteinsen & Lena Henriksen
16.20–16.30		Closing of the parallel session

## Parallel sessions 6–10

Thursday 5th May at 8.30–10.20

### Parallel session 6: COVID-19 and midwifery 1

Room: Fennia 2 (2<sup>nd</sup> floor)

Moderator: Lisa Holm Rinne

8.30–8.50	<b>016</b>	<b>CHANGES IN OBSTETRIC INTERVENTIONS AND PRETERM BIRTH DURING COVID-19: A NATIONWIDE STUDY FROM ICELAND</b> Kristjana Einarsdóttir, Emma Marie Swift & Helga Zoega
8.50–9.10	<b>017</b>	<b>QUALITY OF FACILITY-BASED MATERNAL AND NEWBORN CARE IN NORWAY DURING THE COVID-19 PANDEMIC: A CROSS-SECTIONAL STUDY</b> Ingvild Hersoug Nedberg, Eline Skirnisdottir Vik, Sigrun Kongslie, Iliana Mariani, Emanuelle Pessa Valente, Benedetta Covi & Marzia Lazzarini
9.10–9.30	<b>018</b>	<b>LARGE GAPS IN THE QUALITY OF HEALTH CARE PROVIDED TO MOTHERS DURING THE COVID-19 PANDEMIC IN SWEDEN: A CROSS-SECTIONAL STUDY BASED ON WHO STANDARDS</b> Mehreen Zaigham, Karolina Linden, Verena Sengpiel, Iliana Mariani, Emanuelle Pessa Valente, Marzia Lazzarini, Benedetta Covi & Helen Elden
9.30–9.50	<b>019</b>	<b>THE MIDWIFERY PROFESSION AND QUALITY MIDWIFERY CARE IN BANGLADESH DURING THE COVID-19 PANDEMIC - A FOCUS GROUP DISCUSSION INQUIRY WITH MIDWIVES AND MIDWIFERY EDUCATORS</b> Ulrika Byrskog, Svava Gudjonsdottir, Jonna Holmedahl, Noor Islam Pappu & Kerstin Erlandsson
9.50–10.10	<b>020</b>	<b>WORKING CONDITIONS FOR HOSPITAL-BASED MATERNITY AND NEONATAL HEALTH CARE WORKERS DURING EXTRAORDINARY SITUATIONS – A PRE-/ POST COVID-19 PANDEMIC ANALYSIS AND LESSONS LEARNED</b> Magnus Akerstrom, Ylva Carlsson, Verena Sengpiel, Malin Veje, Anders Elfvin, Ingibjörg H. Jonsdottir, Alessio Degl'Innocenti, Linda Ahlstrom, Helle Wijk & Karolina Linden
10.10–10.20		Closing of the parallel session

### Parallel session 7: Induction of labour

Room: Europaea (1<sup>st</sup> floor)

Moderator: Heli Mäkelä

8.30–8.50	<b>021</b>	<b>DISRUPTION OF PHYSIOLOGICAL LABOUR AMONG NULLIPAROUS WOMEN AT TERM</b> Eva Rydahl, Mette Juhl, Eugene Declercq & Rikke Damkjær Maimburg
8.50–9.10	<b>022</b>	<b>A QUALITATIVE STUDY OF WOMEN'S EXPERIENCE OF LABOUR INDUCTION FOR WOMEN PARTICIPATING IN A STUDY COMPARING INDUCTION IN LATE- AND POSTTERM PREGNANCY</b> Helena Nilvér, Ingela Lundgren, Helen Elden & Anna Dencker

9.10–9.30	<b>023</b>	<b>INDUCTION OF LABOUR FOR NON-MEDICAL REASONS, AND ITS IMPACT ON MATERNAL AND CHILD'S HEALTH, A 16 YEAR AUSTRALIAN POPULATION BASED LINKED-DATA STUDY</b> Lilian Peters, Charlene Thorton, Soo Downe, Anna Seijmonsbergen-Schermers, Ank de Jonge & Hannah Dahlen
9.30–9.50	<b>024</b>	<b>ROUTINE INDUCTION IN LATE-TERM PREGNANCIES: FOLLOW-UP OF A DANISH INDUCTION OF LABOUR PARADIGM</b> Eva Rydahl, Eugene Declercq, Mette Juhl & Rikke Damkjær Maimburg
9.50–10.10	<b>025</b>	<b>A DECISION-MAKING TOOL ON ROUTINE LABOUR INDUCTION FOR WOMEN WHOSE PREGNANCY IS IN THE LATTER PART OF THE TERM PERIOD</b> Mette Juhl, Eva Rydahl & Jette Aaroe Clausen
10.10–10.20		Closing of the parallel session

### Parallel session 8: Sexual and reproductive health and rights

Room: Fennia 1 (2<sup>nd</sup> floor)

Moderator: Katriina Bildjuschkin

8.30–8.50	<b>026</b>	<b>SWEDISH MIDWIVES' AND GYNAECOLOGISTS' ATTITUDES TO SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS AND GENDER EQUALITY</b> Lise Eriksson, Andrey Tibajev, Pontus Strimling & Birgitta Essén
8.50–9.10	<b>027</b>	<b>ROLE OF MIDWIVES IN PREVENTION AND CARE OF THE SURVIVORS OF FEMALE GENITAL MUTILATION/CUTTING (FGM/C)</b> Mimmi Koukkula & Reija Klemetti
9.10–9.30	<b>028</b>	<b>BIRTH OUTCOMES OF WOMEN REPORTING A HISTORY OF VIOLENCE INCLUDING DOMESTIC VIOLENCE DURING PREGNANCY: A LONGITUDINAL COHORT STUDY</b> Hafrún Rafnar Finnbogadóttir, Kathleen Baird & Li Thies-Lagergren
9.30–9.50	<b>029</b>	<b>INTIMATE PARTNER VIOLENCE AND THE ASSOCIATION OF PREGNANCY INTENDEDNESS – A CROSS-SECTIONAL STUDY IN SOUTHEASTERN NORWAY</b> Eva Marie Engebakken Flaathen, Mirjam Lukasse, Milada Cvcancarova Småstuen, Lisa Garnweidner-Holme & Lena Henriksen
9.50–10.10	<b>030</b>	<b>MATERNITY WARD CUSTOMERS WITH INTIMATE PARTNER VIOLENCE EXPERIENCES</b> Raakel Viheroksa, Katri Vehviläinen-Julkunen & Päivi Kankkunen
10.10–10.20		Closing of the parallel session

### Parallel session 9: Professionalisation and education

Room: Nordia (2<sup>nd</sup> floor)

Moderator: Pernilla Stenbäck

8.30–8.50	<b>031</b>	<b>THE CURRENT STATE OF PROFESSIONALISATION OF MIDWIFERY IN EUROPE</b> Joeri Vermeulen, Ans Luyben, Rhona O'Connell, Patricia Gillen, Ramon Escuriet & Valerie Fleming
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8.50–9.10	<b>032</b>	<b>AUGMENTED REALITY (AR) BASED TRAINING – RESUSCITATION OF A NEWBORN</b> Kristina Luksch, Nicola H. Bauer, Jonas Blattgerste, Carmen Lewa, Matthias Joswig, Thies Pfeiffer, Thorsten Schäfer & Annette Bernloehr
9.10–9.30	<b>033</b>	<b>ENHANCING LEADERSHIP IN MIDWIFERY CURRICULUM ON PROMOTING NORMAL BIRTH</b> Leonie Welling, Ólöf Ásta Ólafsdóttir, Elke Tichelman & Berglind Hálfhánsdóttir
9.30–9.50	<b>034</b>	<b>IMPLEMENTING POSTPARTUM HAEMORRHAGE SIMULATION IN THE MIDWIFERY CURRICULUM</b> Lea Brinkmann & Eva Rydahl
9.50–10.10	<b>035</b>	<b>IMPLEMENTATION OF A PROCESSORIENTED REFLECTION MODEL FOR HEALTHCARE PROFESSIONALS TO IMPROVE QUALITY OF INTRAPARTUM CARE IN DEMOCRATIC REPUBLIC OF CONGO</b> Marie Berg, Maria Hogenäs & Malin Bogren
10.10–10.20		Closing of the parallel session

### Parallel session 10: Care related to fear, anxiety and depression

Room: Nautica (1<sup>st</sup> floor)

Moderator: Sari Haapio

8.30–8.50	<b>036</b>	<b>PRECONCEPTION FEAR OF CHILDBIRTH: EXPERIENCES AND NEEDS OF WOMEN FEARING CHILDBIRTH WHILE NOT PREGNANT</b> Elisabet Rondung & Elin Ternström
8.50–9.10	<b>037</b>	<b>THE TRAJECTORY OF FEAR OF BIRTH DURING AND AFTER PREGNANCY IN WOMEN LIVING IN A RURAL AREA FAR FROM THE HOSPITAL AND ITS LABOUR WARD</b> Ingegerd Hildingsson
9.10–9.30	<b>038</b>	<b>HELPING FACTORS AND DESIRED SUPPORT FROM PROFESSIONALS FOR MULTIPARAS WITH FEAR OF CHILDBIRTH</b> Laura Sandström & Anna Liisa Aho
9.30–9.50	<b>039</b>	<b>MIDWIFES ROLE AND PROMOTION OF EARLY INTERVENTION TOWARDS PRENATAL ANXIETY AND DEPRESSION IN THE FAROE ISLANDS; - AN INTERSECTORIAL SHARED CARE-ORGANISATION</b> Sanne Storm, Annika Hoydal & Margretha Thomsen
9.50–10.10	<b>040</b>	<b>EFFECT OF SUPERVISED GROUP EXERCISE ON PSYCHOLOGICAL WELL-BEING AMONG PREGNANT WOMEN WITH OR AT HIGH RISK OF DEPRESSION (THE EWE STUDY): A RANDOMIZED CONTROLLED TRIAL.</b> Lotte Broberg, Ann Tabor, Susanne Rosthøj, Mette Backhausen, Vibe G Frokjaer, Peter Damm & Hanne K Hegaard
10.10–10.20		Closing of the parallel session



## Parallel sessions 11–15

Thursday 5th May at 14.00–15.10

### Parallel session 11: Family life and couple relationships

Room: Nautica (1<sup>st</sup> floor)

Moderator: Sari Haapio

14.00–14.20	<b>041</b>	<b>“FAMILY LIFE STARTS AT HOME” - FATHERS’ EXPERIENCES OF A NEWLY IMPLEMENTED SWEDISH HOME-BASED POSTNATAL CARE MODEL</b> Margareta Johansson, Petra Östlund, Cecilia Holmqvist & Michael B. Wells
14.20–14.40	<b>042</b>	<b>SEXUAL HEALTH AFTER CHILDBIRTH: PREVALENCE, RISK FACTORS AND NEED FOR CARE</b> Frederique Lont, Emma Wassenaar, Corine Verhoeven, Jens Henrichs, Catja Warmelink & Caroline Geerts
14.40–15.00	<b>043</b>	<b>PARENTAL-COUPLE SEPARATION DURING THE TRANSITION TO PARENTHOOD</b> Åsa Gangam Leanderz, Jenny Hallgren, Maria Henricson, Margaretha Larsson & Caroline Bäckström
15.00–15.10		Closing of the parallel session

### Parallel session 12: Pain control in childbirth

Room: Europaea (1<sup>st</sup> floor)

Moderator: Mervi Hakala

14.00–14.20	<b>044</b>	<b>INTRAPARTUM PUDENDAL NERVE BLOCK ANALGESIA AND CHILDBIRTH EXPERIENCE IN PRIMIPAROUS WOMEN</b> Åsa Henning Waldum, Mirjam Lukasse, Anne Cathrine Staff, Ragnhild Sørum Falk, Ingvil Krarup Sørbye & Anne Flem Jacobsen
14.20–14.40	<b>045</b>	<b>WOMEN’S PERCEPTIONS OF COUNSELLING IN NON-PHARMACOLOGICAL PAIN MANAGEMENT DURING LABOUR: A CROSS-SECTIONAL SURVEY</b> Mervi Hakala, Arja Rantala & Tarja Pölkki
14.40–15.00	<b>046</b>	<b>WOMEN’S PERCEPTIONS OF NONPHARMACOLOGICAL PAIN RELIEF METHODS AND SATISFACTION WITH THEIR USE DURING LABOUR</b> Arja Rantala, Mervi Hakala & Tarja Pölkki
15.00–15.10		Closing of the parallel session

### Parallel session 13: Caring for migrant women

Room: Nordia (2<sup>nd</sup> floor)

Moderator: Pirjo Koski

14.00–14.20	<b>047</b>	<b>THE IMPACT OF GROUP ANTENATAL CARE ON SWEDISH-SOMALI WOMEN’S RATINGS OF CARE AND EMOTIONAL WELLBEING. FINDINGS FROM A HISTORICALLY CONTROLLED EVALUATION</b> Malin Ahrne, Erica Schytt, Ewa Andersson, Rhonda Small, Birgitta Essén & Ulrika Byrskog
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14.20–14.40	<b>048</b>	<b>“NO PAPERS, NO DOCTOR”: A QUALITATIVE STUDY OF ACCESS TO MATERNITY CARE SERVICES FOR UNDOCUMENTED IMMIGRANT WOMEN IN DENMARK</b> Julia Kadin Funge, Mathilde Christine Boye, Helle Johnsen & Marie Nørredam
14.40–15.00	<b>049</b>	<b>DIFFERENCES IN MATERNAL AND PERINATAL OUTCOMES IN CHILDBIRTH BASED ON CITIZENSHIP: A POPULATION-BASED COHORT STUDY IN ICELAND</b> Embla Ýr Guðmundsdóttir, Helga Gottfreðsdóttir, Marianne Nieuwenhuijze, Berglind Hálfhánsdóttir, Mika Gissler & Kristjana Einarsdóttir
15.00–15.10		Closing of the parallel session

#### **Parallel session 14: Pregnancy and prenatal care 1**

**Room:** Fennia 2 (2<sup>nd</sup> floor)

**Moderator:** Salla Asplund

14.00–14.20	<b>050</b>	<b>WOMEN´S PERSONAL STRATEGIES ON MANAGING AND INTEGRATING ADVICE ON GESTATIONAL DIABETES INTO THEIR LIVES - A QUALITATIVE STUDY</b> Lene Toxvig, Jane Hyldgaard Nielsen & Ingrid Jepsen
14.20–14.40	<b>051</b>	<b>TARGET BEHAVIORS FOR WEIGHT MANAGEMENT INTERVENTIONS FOR OVERWEIGHT PREGNANT WOMEN BY THE BEHAVIOUR CHANGE WHEEL</b> Johanna Saarikko, Hannakaisa Niela-Vilén & Anna Axelin
14.40–15.00	<b>052</b>	<b>USE OF NONSTEROIDAL ANTI-INFLAMMATORY DRUGS DURING PREGNANCY; A DANISH NATIONWIDE DRUG UTILIZATION STUDY</b> Amani Meaidi, Lina Steinrud Mørch, Hanne K. Hegaard, Christian Torp-Pedersen & Ane L. Rom
15.00–15.10		Closing of the parallel session

#### **Parallel session 15: Models for midwifery care 1**

**Room:** Fennia 1 (2<sup>nd</sup> floor)

**Moderator:** Pernilla Stenbäck

14.00–14.20	<b>053</b>	<b>MODELS FOR MIDWIFERY CARE – A MAPPING REVIEW</b> Tine Schauer Eri, Marie Berg, Bente Dahl, Helga Gottfreðsdóttir, Eva Sommerseth & Christina Prinds
14.20–14.40	<b>054</b>	<b>WOMEN’S EXPERIENCES OF CASELOAD IN RURAL SWEDEN – A LONGING FOR A SENSE OF SECURITY</b> Hanna Fahlbeck, Birgitta Larsson, Ingegerd Hildingsson & Margareta Johansson
14.40–15.00	<b>055</b>	<b>A CASELOAD MIDWIFERY MODEL AT KAROLINSKA UNIVERSITY HOSPITAL HUDDINGE. MEDICAL SAFETY FOR THE MOTHER AND INFANT AFTER TWO YEARS OF PRACTICE.</b> Mia Ahlberg
15.00–15.10		Closing of the parallel session

## Parallel sessions 16–20 and a workshop

Thursday 5th May at 15.40 – 16.50

### Workshop: From idea to a full model of care - midwifery continuity of care model

Leader: Mia Ahlberg

Room: Press Room (1<sup>st</sup> floor)

15.40–16.40 Mia Ahlberg will lead a workshop on midwifery caseload model of care (The participation is limited for max 25 participants – an enrollment beforehand via the website of the Congress is required.)

### Parallel session 16: Doula support for migrant women

Room: Nautica (1<sup>st</sup> floor)

Moderator: Mariette Pontán

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| 15.40–16.00 | <b>056</b> | <b>THE COMMUNITY-BASED BILINGUAL DOULA – A NEW ACTOR FILLING GAPS IN LABOUR CARE FOR MIGRANT WOMEN. FINDINGS FROM A QUALITATIVE STUDY OF MIDWIVES’ AND OBSTETRICIANS’ EXPERIENCES</b><br>Erica Schytt, Anna Wahlberg, Rhonda Small, Amani Eltayb & Helena Lindgren  |
| 16.00–16.20 | <b>057</b> | <b>COMMUNITY-BASED BILINGUAL DOULA SUPPORT DURING LABOUR AND BIRTH TO IMPROVE MIGRANT WOMEN’S INTRAPARTUM CARE EXPERIENCE AND EMOTIONAL WELL-BEING – FINDINGS FROM A RANDOMISED CONTROLLED TRIAL IN STOCKHOLM, SWEDEN</b><br>Erica Schytt, Helena Lindgren, Anna Wahlberg, Amani Eltayb, Nataliia Tsekhmestruk & Rhonda Small |
| 16.20–16.40 | <b>058</b> | <b>COMMUNITY-BASED BILINGUAL DOULAS FOR MIGRANT WOMEN IN LABOUR AND BIRTH: FINDINGS FROM A SWEDISH REGISTER-BASED COHORT STUDY</b><br>Ulrika Byrskog, Rhonda Small & Erica Schytt   |
| 16.40–16.50 |            | Closing of the parallel session   |

### Parallel session 17: Woman-centred care

Room: Nordia (2<sup>nd</sup> floor)

Moderator: Anita Wikberg

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| 15.40–16.00 | <b>059</b> | <b>WHAT WOMEN EMPHASISE AS IMPORTANT ASPECTS OF CARE IN CHILDBIRTH – AN ONLINE SURVEY</b><br>Carina Vedeler, Anne Britt Vika Nilsen, Ellen Blix, Soo Downe & Tine Schauer Eri  |
| 16.00–16.20 | <b>060</b> | <b>EVALUATING THE USEFULNESS OF A MIDWIFERY MODEL OF WOMAN-CENTRED CARE (MIMO) IN PRACTICE AT A LABOUR WARD IN SWEDEN</b><br>Ingela Lundgren, Olof Asta Olafsdottir, Christina Nilsson, Malin Hansson, Anna Dencker & Marie Berg |
| 16.20–16.40 | <b>061</b> | <b>AUTONOMY DURING CHILDBIRTH: A PHENOMENOLOGICAL HERMENEUTICAL ANALYSIS OF PERSONAL AUTONOMY EXPERIENCED BY WOMEN GIVING BIRTH</b><br>Karen Børnsten  |
| 16.40–16.50 |            | Closing of the parallel session  |

### Parallel session 18: Pregnancy and prenatal care 2

Room: Fennia 2 (2<sup>nd</sup> floor)

Moderator: Lisa Holm Rinne

15.40–16.00	<b>062</b>	<b>EFFECTS OF A MIDWIFE-COORDINATED MATERNITY CARE INTERVENTION (CHROPREG) VS. STANDARD CARE: RESULTS FROM A RANDOMIZED CONTROLLED TRIAL</b> Mie G de Wolff, Julie Midtgaard, Marianne Johansen, Ane L Rom, Susanne Rosthøj, Ann Tabor & Hanne K Hegaard
16.00–16.20	<b>063</b>	<b>CONTEXTUAL FACTORS INFLUENCING THE MAMA ACT INTERVENTION ACROSS DENMARK - A QUALITATIVE STUDY OF NON-WESTERN IMMIGRANT WOMEN'S RESPONSE TO PREGNANCY COMPLICATIONS IN EVERYDAY LIFE</b> Helle Johnsen, Ulla Christensen, Mette Juhl & Sarah Fredsted Villadsen
16.20–16.40	<b>064</b>	<b>REVIEWING BIRTH EXPERIENCE WITH A KNOWN MIDWIFE FOLLOWING A HIGH-RISK PREGNANCY: A PROCESS EVALUATION</b> Valgerður Lísa Sigurðardóttir, Jenny Gamble, Herdís Sveinsdóttir, Berglind Guðmundsdóttir & Helga Gottfreðsdóttir
16.40–16.50		Closing of the parallel session

### Parallel session 19: Intrapartum care 1

Room: Europaea (1<sup>st</sup> floor)

Moderator: Johanna Nyssölä

15.40–16.00	<b>065</b>	<b>AN ETHNOGRAPHY OF THE INFLUENCE AND MEANING OF THE HOSPITAL BIRTHING ROOM FOR LABOURING NULLIPAROUS WOMEN</b> Lisa Goldkuhl, Lisen Dellenborg, Marie Berg, Helle Wijk & Christina Nilsson
16.00–16.20	<b>066</b>	<b>MANAGEMENT OF THE ACTIVE SECOND STAGE OF LABOR IN WATERBIRTHS COMPARED WITH CONVENTIONAL BIRTHS</b> Hanna Ulfsdóttir, Sissel Saltvedt, Malin Edqvist & Susanne Georgsson
16.20–16.40	<b>067</b>	<b>BUSY DAY EFFECT ON INTRAPARTUM ADVERSE MATERNAL OUTCOMES – A POPULATION BASED STUDY OF 601 247 SINGLETON DELIVERIES</b> Riitta Vilkkö, Sari Räisänen, Mika Gissler, Vedran Stefanovic & Seppo Heinonen
16.40–16.50		Closing of the parallel session

### Parallel session 20: Postnatal care 2

Room: Fennia 1 (2<sup>nd</sup> floor)

Moderator: Heli Mäkelä

15.40–16.00	<b>068</b>	<b>SUPPORT DURING THE POSTNATAL PERIOD – EVALUATION OF MOTHERS AND MIDWIVES' EXPERIENCES OF A NEW COORDINATED POSTNATAL CARE-MODEL IN A MIDWIFERY CLINIC</b> Ragnhild Eikemo & Mia Barimani
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16.00–16.20	<b>069</b>	<b>‘THEY WERE MORE OF A HINDRANCE THAN A HELP’: HOW CAN HEALTHCARE WORKERS PROVIDE BETTER SUPPORT FOR WOMEN IN THE POSTNATAL PERIOD?</b> Vivien Swanson & Leena Hannula
16.20–16.40	<b>070</b>	<b>MOTHERS’ SELF-EFFICACY AND PARENTING SATISFACTION DURING THE POSTPARTUM PERIOD – EVALUATION OF AN INFANT CALMING INTERVENTION</b> Elina Botha
16.40–16.50		Closing of the parallel session

## Parallel sessions 21–25

### Friday 6th May at 8.30–10.20

#### Parallel session 21: Medicalisation of childbearing -symposium

Room: Europaea (1<sup>st</sup> floor)

Moderator: Pia Liljeroth

8.30–8.55	<b>071</b>	<b>MEDICALISATION IN PREGNANCY AND CHILDBIRTH – What it is, and how it influences contemporary maternity care? (Part 1)</b> Eva Rydahl
8.55–9.20	<b>072</b>	<b>MEDICALISATION IN PREGNANCY AND CHILDBIRTH – do we have a problem? (Part 2)</b> Eva Rydahl
9.20–9.35	<b>073</b>	<b>POTENTIAL FOR IMPROVEMENT IN NORWEGIAN LABOUR CARE</b> Gry Skogheim & Ingela Lundgren
9.35–9.50	<b>074</b>	<b>THE OVERUSE OF INTRAPARTUM CARDIOTOCOGRAPHY (CTG) FOR LOW-RISK WOMEN – AN ACTOR-NETWORK THEORY ANALYSIS</b> Ingrid Jepsen, Ellen Blix, Helen Cooke, Stine W. Adrian & Robyn Maude
9.50–10.20		A PANEL QUESTION AND ANSWER SESSION

#### Parallel session 22: Provision of contraception and contraceptive counselling

Room: Nautica (1<sup>st</sup> floor)

Moderator: Lisa Holm Rinne

8.30–8.50	<b>075</b>	<b>NORWEGIAN WOMEN’S EXPERIENCES AND OPINIONS ON CONTRACEPTIVE COUNSELLING – QUANTITATIVE AND QUALITATIVE ANALYSES</b> Mirjam Lukasse, Marie Christine Gulla Baglo, Eldri Engdal, Ragnhild Lassemo & Kristin E. Forsberg
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The following four works will be presented as an entity, one after another, and after that, there will be a common discussion on them.

8.50–10.10

**076**

**FACTORS RELATED TO PROVISION OF LONG-ACTING REVERSIBLE CONTRACEPTION AFTER SURGICAL ABORTION. A SWEDISH NATIONWIDE CROSS-SECTIONAL STUDY**

Sara Hogmark, Niklas Envall, Anna Wikman, Charlotte Skoglund, Helena Kopp Kallner & Susanne Hesselman

**077**

**STRUCTURED CONTRACEPTIVE COUNSELLING INCREASES UPTAKE OF LONG-ACTING REVERSIBLE CONTRACEPTION AND REDUCES PREGNANCIES AMONG PATIENTS SEEKING ABORTION – A CLUSTER RANDOMISED CONTROLLED TRIAL (THE LOWE TRIAL)**

Karin Emtell Iwarsson\*, Niklas Envall\*, Isabella Bizjak, Johan Bring, Helena Kopp Kallner & Kristina Gemzell Danielsson (\*Joint first authorship)

**078**

**USER SATISFACTION WITH AN INTERVENTION FOR STRUCTURED CONTRACEPTIVE COUNSELLING. RESULTS FROM THE LOWE TRIAL**

Niklas Envall, Karin Emtell Iwarsson, Isabella Bizjak, Kristina Gemzell Danielsson & Helena Kopp Kallner

**079**

**SATISFACTION AND EFFECTS OF STRUCTURED CONTRACEPTIVE COUNSELLING ON LONG-ACTING REVERSIBLE CONTRACEPTION AMONG NON-MIGRANT, FOREIGN-BORN MIGRANT AND SECOND-GENERATION MIGRANT WOMEN: EVIDENCE FROM THE LOWE TRIAL, SWEDEN**

Karin Emtell Iwarsson, Elin C. Larsson, Isabella Bizjak, Niklas Envall, Helena Kopp Kallner & Kristina Gemzell Danielsson

Discussion on works 076–079

10.10–10.20

Closing of the parallel session

### **Parallel session 23: Staff wellbeing and retention**

**Room:** Fennia 2 (2<sup>nd</sup> floor)

**Moderator:** Johanna Nyssölä

8.30–8.50

**080**

**SELFCOMPASSION AND PROFESSIONAL QUALITY OF LIFE AMONG MIDWIVES AND NURSE ASSISTANTS IN FIVE OBSTETRIC SETTINGS IN SWEDEN**

Karin Ängeby, Christine Rubertsson, Ingegerd Hildingsson & Malin Edqvist

8.50–9.10

**081**

**MIDWIVES' OCCUPATIONAL WELLBEING IN THE NETHERLANDS**

Liesbeth Kool, Esther Feijen-de Jong, Nicole J.J.M. Mastenbroek, François G. Schellevis & Debbie Jaarsma

9.10–9.30

**082**

**REASONS OF INTENTION TO LEAVE OF MIDWIVES AND REASONS FOR THE ACTUAL TURNOVER OF MIDWIVES: RESULTS OF A MIXED METHODS STUDY IN THE NETHERLANDS**

Esther Feijen-de Jong, Nicolette van der Voort-Pauw, Esther Nieuwschepen-Ensing & Liesbeth Kool

9.30–9.50	<b>083</b>	<b>PROFESSIONAL COURAGE TO CREATE A PATHWAY WITHIN MIDWIVES' FIELDS OF WORK</b> Malin Hansson, Ingela Lundgren, Gunnel Hensing, Anna Dencker, Monica Eriksson & Ing-Marie Carlsson
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9.50–10.00 Closing of the parallel session

### Parallel session 24: Fertility, pregnancy and birth – register studies

Room: Nordia (2<sup>nd</sup> floor)

Moderator: Sari Räisänen

8.30–8.50	<b>084</b>	<b>FERTILITY RATES AND THE POSTPONEMENT OF FIRST BIRTHS: A DESCRIPTIVE STUDY WITH FINNISH POPULATION DATA</b> Zahra Roustaei, Sari Räisänen, Mika Gissler & Seppo Heinonen
8.50–9.10	<b>085</b>	<b>SOCIOECONOMIC DIFFERENCES IN THE ASSOCIATION BETWEEN MATERNAL AGE AND MATERNAL OBESITY: A REGISTER-BASED STUDY OF 707 728 WOMEN IN FINLAND</b> Zahra Roustaei, Sari Räisänen, Mika Gissler & Seppo Heinonen
9.10–9.30	<b>086</b>	<b>WOMEN WHO SMOKE AT START OF PREGNANCY MORE LIKELY REFERRED TO GYNAECOLOGIST DURING PREGNANCY AND BIRTH: RESULTS FROM A COHORT STUDY</b> Stella Weiland, Lilian Peters, Marjolein Berger, Jan Jaap Erwich & Danielle Jansen
9.30–9.50	<b>087</b>	<b>RISK OF RECURRENT PREECLAMPSIA BY MATERNAL REGION OF BIRTH: A NATIONWIDE POPULATION-BASED STUDY</b> Karolina S. Mæland, Nils-Halvdan Morken, Erica Schytt, Vigdis Aasheim & Roy Miodini Nilsen
9.50–10.10	<b>088</b>	<b>TRENDS IN LABOR INDUCTION INDICATIONS: A 20-YEAR POPULATION-BASED STUDY</b> Emma M Swift, Johanna Gunnarsdottir, Helga Zoega, Thora Steingrimsdottir, Ragnheidur I Bjarnadottir & Kristjana Einarsdottir

10.10–10.20 Closing of the parallel session

### Parallel session 25: Intrapartum care 2

Room: Fennia 1 (2<sup>nd</sup> floor)

Moderator: Salla Asplund

8.30–8.50	<b>089</b>	<b>ATTITUDES TOWARDS CAESAREAN SECTION, INTERPROFESSIONAL TEAMWORK AND ORGANIZATIONAL CULTURE AT FIVE SWEDISH MATERNITY WARDS</b> Karin Johnson, Malin Edqvist, Karin Ängeby, Charlotte Elvander, Kari Johansson & Sissel Saltvedt
8.50–9.10	<b>090</b>	<b>THE INFLUENCE OF SPECIFIC ACUPUNCTURE TREATMENT ON THE DURATION OF 1ST STAGE OF LABOUR: RANDOMIZED INTERVENTION PILOT STUDY</b> Guðlaug María Sigurðardóttir, Ólöf Ásta Ólafsdóttir & Berglind Hálfhánsdóttir

9.10–9.30	<b>091</b>	<b>PREVALENCE OF AMNIOTOMY IN SWEDEN: A NATIONWIDE REGISTER STUDY</b> Sofia Tallhage, Kristofer Årestedt, Kristina Schildmeijer & Marie Oscarsson
9.30–9.50	<b>092</b>	<b>THE IMPACT OF THE INTRODUCTION OF INTRAPARTUM FETAL ECG ST SEGMENT ANALYSIS (STAN®). A POPULATION STUDY</b> Ellen Blix, Anne Eskild, Irene Skau & Jostein Grytten
9.50–10.00		Closing of the parallel session

## Parallel sessions 26–29 and a workshop

### Friday 6th May at 13.05–14.35

#### **Workshop: Contraception and contraceptive counselling**

**Leader:** Niklas Envall

**Room:** Press Room (1<sup>st</sup> floor)

13.05–14.05 Niklas Envall will lead a workshop on contraception and contraceptive counselling (The workshop participation is limited for max 25 participants – an enrollment beforehand via the website of the Congress is required.)

#### **Parallel session 26: COVID-19 and midwifery 2**

**Room:** Fennia 1 (2<sup>nd</sup> floor)

**Moderator:** Pia Liljeroth

13.05–13.25	<b>093</b>	<b>PSYCHOLOGICAL HEALTH OF PREGNANT AND POSTPARTUM WOMEN BEFORE AND DURING THE COVID-19 PANDEMIC</b> Yvonne (Fontein)Kuipers & Eveline Mestdagh
13.25–13.45	<b>094</b>	<b>PSYCHOLOGICAL WELL-BEING AND WORRIES AMONG PREGNANT WOMEN DURING THE FIRST PHASE OF THE COVID-19 PANDEMIC COMPARED WITH A HISTORICAL GROUP: A HOSPITAL-BASED CROSS-SECTIONAL STUDY</b> Lotte Broberg, Ane L Rom, Mie G de Wolff, Stinne Høgh, Nina O Nathan, Louise D Paarlberg, Karl B. Christensen, Peter Damm & Hanne Kristine Hegaard
13.45–14.05	<b>095</b>	<b>BEING IN THE SHADOW OF THE UNKNOWN – SWEDISH WOMEN’S LIVED EXPERIENCES OF PREGNANCY DURING THE COVID-19 PANDEMIC, A PHENOMENOLOGICAL STUDY</b> Karolina Linden, Nimmi Domgren, Mehreen Zaigham, Verena Sengpiel, Maria EV. Andersson & Anna Wessberg
14.05–14.25	<b>096</b>	<b>GIVING BIRTH AND BECOMING A PARENT DURING THE COVID-19 PANDEMIC: A QUALITATIVE ANALYSIS</b> Tine Schauer Eri, Ellen Blix, Soo Downe, Carina Vedeler & Anne Britt Vika Nilsen
14.25–14.35		Closing of the parallel session



### Parallel session 27: Breastfeeding from the point of view of mothers and professionals

Room: Europaea (1<sup>st</sup> floor)

Moderator: Mervi Hakala

13.05–13.25	<b>097</b>	<b>THE INFLUENCE OF IMPLEMENTING THE BABY-FRIENDLY HOSPITAL INITIATIVE ON HEALTHCARE PROFESSIONALS' BREASTFEEDING ATTITUDES AND HOSPITAL PRACTICES IN DELIVERY AND NEONATAL INTENSIVE CARE UNITS</b> Heli Mäkelä, Anna Axelin, Terhi Kolari, Tuula Kuivalainen & Hannakaisa Niela-Vilén
13.25–13.45	<b>098</b>	<b>MOTHERS' PERCEPTIONS AND EXPERIENCES OF BREASTFEEDING SUPPORT IN BABY-FRIENDLY HOSPITALS: AN INTEGRATIVE REVIEW</b> Jaana Lojander, Heli Mäkelä & Hannakaisa Niela-Vilén
13.45–14.05	<b>099</b>	<b>BREASTFEEDING SUPPORT IN A BIRTH HOSPITAL BEFORE AND AFTER DESIGNATION TO THE BABY-FRIENDLY HOSPITAL INITIATIVE: A MATERNAL PERSPECTIVE</b> Jaana Lojander, Anna Axelin, Paula Bergman & Hannakaisa Niela-Vilén
14.05–14.25	<b>0100</b>	<b>MATERNAL BREASTFEEDING ATTITUDES AND THEIR ASSOCIATION WITH THE DURATION OF EXCLUSIVE BREASTFEEDING</b> Päivi Oinonen & Hannakaisa Niela-Vilén
14.25–14.35		Closing of the parallel session

### Parallel session 28: Caring for vulnerable women 2

Room: Nordia (2<sup>nd</sup> floor)

Moderator: Anita Wikberg

13.05–13.25	<b>0101</b>	<b>SOCIAL MATERNITY CARE: A CARE CONCEPT CONTRIBUTING TO THE REPRODUCTIVE HEALTH OF WOMEN IN VULNERABLE SITUATIONS</b> Marijke Hendrix, Darie Daemers & Marianne Nieuwenhuijze
13.25–13.45	<b>0102</b>	<b>IMPROVING MATERNITY CARE FOR VULNERABLE WOMEN: AN EVALUATION OF TWO INTERVENTIONS</b> Linda Quadvlieg, Marianne van den Hof-Boering & Esther Feijen-de Jong
13.45–14.05	<b>0103</b>	<b>OVERVIEW OF THE IMPLEMENTATION RATE OF INTERVENTIONS ALIGNED FOR PREGNANT WOMEN IN A VULNERABLE SITUATION IN NORTH-NETHERLANDS</b> Catja Warmelink, Relinde van der Stouwe, Maria Dalmaijer, Danielle Jansen & Esther Feijen-de Jong
14.05–14.25	<b>0104</b>	<b>EXPERIENCES AND NEEDS OF VULNERABLE WOMEN WITH REGARD TO RECEIVING ADDITIONAL INTERVENTIONS IN MATERNITY CARE; A QUALITATIVE STUDY</b> Esther Feijen-de Jong, Maria Dalmaijer, Danielle Jansen, Relinde van der Stouwe & Catja Warmelink
14.25–14.35		Closing of the parallel session

**Parallel session 29: Models for midwifery care 2**Room: Fennia 2 (2<sup>nd</sup> floor)

Moderator: Johanna Nyssölä

13.05–13.25	<b>0105</b>	<b>OUTCOMES OF FREESTANDING MIDWIFERY UNITS AND ALONGSIDE MIDWIFERY UNITS: A SYSTEMATIC REVIEW</b> Guðlaug Erla Vilhjálmsdóttir, Berglind Hálfðánsdóttir & Ólöf Ásta Ólafsdóttir
13.25–13.45	<b>0106</b>	<b>A FREESTANDING MIDWIFERY UNIT: AN OVERVIEW OF PERINATAL AND NEONATAL OUTCOMES IN 2018-2020</b> Stefanía Ósk Margeirsdóttir & Emma Marie Swift
13.45–14.05	<b>0107</b>	<b>AASTRIKA MIDWIFERY CENTER, A MODEL FOR MIDWIFERY-LED CARE IN INDIA</b> Malin Bogren & Kerstin Erlandsson
14.05–14.25	<b>0108</b>	<b>IMPROVING MIDWIFE LED CONTINUITY OF CARE (MLCC) BY TWINNING MIDWIVES WORKING IN COMMUNITY AND HOSPITAL SETTINGS WITHIN THE NETHERLANDS.</b> Franka Cadée, Liselotte Kweekel, Erna Kerkhof & Bernice Engeltjes
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Margareta Johansson & Lisa Amir



# KEYNOTE LECTURES



# MIDWIFERY – A VISION FOR 2022–2030

## Frances McConville

- Midwifery Adviser at the World Health Organisation (WHO) HQ since 2013
- Nurse, midwife, BSc Life Science, Masters in Economics and Social Welfare
- Supporting Member States to improve evidence-based quality midwifery education and care for all women, newborns and their families everywhere.
- Prior to WHO:
  - Health Adviser to the UK's Department for International Development (DFID) based in the London HQ, as well as in Bangladesh and Somalia.
  - development and humanitarian experience in sexual, reproductive, maternal and newborn health with UNICEF, IFRC, and a range of NGOs through living and working in Bangladesh, India, Burma, Malawi, Kenya, Somalia and Iraq.
  - lecturer in maternal and newborn health/ gender and reproductive health, at the University of Wales, Swansea.
- In 2020 awarded the title Honorary Professor of Practice at Queen's University, Belfast.

The past two years has seen a notable increase in global attention to midwifery through both the International Year of the Nurse and Midwife (2020), and the publication in 2021 of the State of the Worlds Midwifery (SOWMy) report and the WHO Strategic Directions in Nursing and Midwifery (SDNM) 2021–25. The SOWMy report, led by UNFPA with WHO and the International Confederation of Midwives (ICM), provided a clear focus to four major areas to be addressed urgently in global midwifery: strengthen midwifery leadership, strengthen quality midwifery education, invest in midwife-led care and services and improve planning and management of the midwifery workforce. The WHO SDNM was unanimously endorsed by all 193 Member States of the World Health Organization (WHO) at the World Health Assembly in May 2021. The key recommendations are: education, leadership, jobs and service delivery.

There is no doubt in 2022 that all countries want to see improvement in access to the full scope of high quality midwifery care for all women, newborns and their families. The question is how can this be done in the most effective, and cost effective way, especially in low and middle income countries? This keynote speech will enable you to hear the voices of midwives in government, education, and research and will highlight the challenges they face and the progress they are making in 5 countries: India, Pakistan, Malawi, Sierra Leone and Bolivia.

Both the SOWMy report and the SDNM recommend strengthening midwifery leadership. You will hear from midwives that, even though there is currently

no global guidance on how to do this, we are working together to develop a methodology that will support countries to provide the first national Midwifery Leadership Profiles. This will guide ministries of health and midwifery leaders (from students to Government Midwifery Officers) through a process that will highlight the gaps that need to be addressed to strengthen global leadership.

We know that the continuity of midwifery care in high income countries, such as the Nordic countries where you are all highly educated midwives, results in very positive outcomes for both mothers and their babies. This includes significant reductions in pre-term birth, far fewer unnecessary medical interventions (such as reduced episiotomy rates) and much better levels of satisfaction for mothers. But we do not yet have the evidence on what is needed to support LMICs to make this change. WHO has been leading the development of a Theory of Change to guide the implementation of continuity of midwifery care, and you will hear how this can make a difference.

Postnatal care has been a much neglected area of midwifery in many countries, and WHO will release new PNC guidelines in March 2022. We want all Nordic midwives to be familiar with these guidelines which will be shared, and improve the postnatal care of women and newborns, including in areas not previously researched such as perinatal mental health.

Last but not least, we all need to learn and understand more about the impact of climate change on women, their newborns and on midwives. We will share the latest evidence on the impact of climate change on women and newborns, as well as what health workers say they need globally to support adaptation and mitigation of climate change.

Hopefully, there will also be time for a lively discussion so we can hear YOUR voices!

# DIGITALIZATION AND MIDWIFERY

## Hannakaisa Niela-Vilén

RM, PhD, Docent, Senior researcher, Department of Nursing Science,  
University of Turku, Finland

Digitalization is here and strongly integrated into our daily life. Digital health solutions could support sustainable and equitable care and enable universal access to high-quality health care services, including midwifery care. Social media, mobile applications and many other digital solutions can be utilized in all sectors of midwifery practice. There are for example, mobile applications (apps) for menstrual tracking, postmenopausal women, women with breast cancer as well as pregnant or breastfeeding women, to mention a few. The apps may improve some health outcomes and provide information for users. Although digital technology offers various possibilities to improve care, technological solutions seem to be vaguely adopted both in midwifery and nursing. However, many midwives already feel confident using digital technology in their clinical practice. It is also notable that digital resources are used in midwifery education thus future midwives may adopt new technology as a natural part of their practice.

Digital technology could be used to strive toward more personalized midwifery care. With the support of technology, continuous monitoring, tracking, and transmitting personal health metrics in real time has become possible in more advanced ways than ever before. Provided care could be tailored and personalized according to the received information. Digital technology could potentially be used as monitoring instrument, for example, during pregnancy. Remote monitoring could increase the engagement of pregnant women with their health. It is, however, important to understand the perspectives of all end-users such as pregnant women and midwives, public health nurses as well as obstetricians. Remote monitoring could be used as a supplementary system in pregnancy care and it might even replace some healthcare visits.

In our multi-disciplinary research group, we have developed an Internet-of-Things based system to provide ubiquitous health monitoring during pregnancy and the postpartum period. The system consists of various data collectors to track the woman's condition, including stress, sleep, and physical activity. Smartwatches and smart rings as well as mobile apps have been used as monitoring devices. The results have been promising; smart devices seem to be feasible tools for continuous monitoring and collecting representative health data during pregnancy and postpartum period.

# NORDIC REGISTERS FOR SEXUAL AND REPRODUCTIVE HEALTH – THE SIGNIFICANCE OF CLOSE COOPERATION

## Mika Gissler

Professor and an honorary member of The Federation of Finnish Midwives

- THL Finnish Institute for Health and Welfare, Information Services Department, Helsinki, Finland
- University of Turku, Research Centre for Child Psychiatry, Turku, Finland
- Region Stockholm, Academic Primary Health Care Centre, Stockholm, Sweden
- Karolinska Institutet, Department of Molecular Medicine and Surgery, Stockholm, Sweden

The Nordic births are covered by three different statistical systems. First, all live births are registered to Central Population Register, which is the basis for vital statistics. Second, all stillbirths and deaths of live born children are registered in Cause-of-Death Register, kept by statistical or health authorities. Third, all Nordic countries have introduced a separate Medical Birth Register for more detailed collection of parturients, deliveries and newborns. Norway was the first to start one in 1967, and Denmark, Iceland and Sweden followed in the early 1970s. Finland was the last Nordic country to start a similar registration system in 1987.

There is a certain variation in the content of the Nordic Medical Birth Registers, but all the registers include information on maternal socio-demographic background, pregnancy history, maternal diagnoses, care and interventions during pregnancy and delivery, and information on newborn health, diagnoses, care and interventions. The follow-up ends usually when the child is discharged from the hospital or latest until the end of perinatal period. All Nordic Medical Birth Registers include the personal identification numbers for the mothers and their live birth children, but some countries record even partners' identification numbers.

A Register on Congenital Anomalies are usually closely linked to the Medical Birth Register, either as a separate register or as a part of the Medical Birth Register. Their follow-up period is usually from six to twelve months, and the register covers also induced abortions due to fetal problems.

Medical Birth Registers have been widely used in scientific research. The long-term collection of birth data as well as possibilities to link different registers provides good possibilities for unique studies. These include cross-sectional studies, repeated studies, trend studies, and family studies, but also longitudinal studies with retrospective data collection or follow-up data. These studies have shown that it is feasible to combine information from all Nordic Medical Birth Registers, but the process can be complicated and time-consuming due to different content of the registers, data protection issues and limited resources allocated for building large research datasets for researchers.

## BIRTH REGISTER RESEARCH – AN OPPORTUNITY TO GAIN EVIDENCE ON MIDWIFERY

**Sari Räisänen**

RN, RM, PhD, Principal Lecturer, Docent, Tampere University of Applied Sciences, Finland

All the Nordic countries are collecting individual level data on births. The medical birth registers cover data on live births and on stillbirths of fetuses with a birth weight of at least 500 g or with a gestational age of at least 22 weeks, as well as data on the mothers' reproductive history. This data might be considered as a quality register of maternity care services because it makes possible to study pregnancy outcomes at individual, hospital, and whole ecosystem level. If studying an association between interventions and outcomes at an individual level it is of note that all interventions are used by indication, and this makes analyses prone to bias. A good example of that is an association between episiotomy and obstetric anal sphincter injury as well as if considering whether epidural analgesia is associated with giving birth by vacuum extraction. Further, data is possible to be amended with socioeconomic information to study effects of social deprivation on pregnancy outcomes and use of interventions reflecting equity of maternity care services. Giving birth by cesarean section is lowest in the Nordic countries and considerations on equity by birth mode is an interesting and important aspect. It is also possible to study new exposures, such as effect of hard workload on safety and quality of care. This kind of research initiatives makes possible to consider how the whole ecosystem is working.

# DEVELOPING BREASTFEEDING SUPPORT IN NORDIC COUNTRIES

**Leena Hannula**

RN, RM, PhD, Principal Lecturer, Metropolia University of Applied Sciences, Finland

**Background:** WHO and UNICEF launched the Baby Friendly Hospital Initiative 1989 to support and promote breastfeeding. Since then, many countries, hospitals and communities have been striving to improve their breastfeeding support practices. There is voluminous evidence of the short and long-term benefits of breastfeeding for both the mother and the infant. However, breastfeeding is not always easy and many mothers struggle to achieve their desired goals. Professional and peer support are in the key role in helping new mothers to succeed.

**Aim:** The presentation discusses the breastfeeding rates, breastfeeding support systems and available breastfeeding education in the Nordic Countries.

**Methods:** The data was collected from several online databases and from interviews with country experts.

**Results and Conclusions:** Each Nordic Country has had its unique path to becoming more breastfeeding friendly. This presentation will discuss the many approaches to breastfeeding support practises that have developed during the last decades. It will review the changing breastfeeding prevalence statistics, various training programs provided, and new positions created, and other developmental activities carried out by hospitals and communities. In addition, we will look at some new approaches that have grown in the volunteer support sector.



# ORAL PRESENTATIONS



**01****CANCELLED****02**

## **EXPERIENCES OF PRIMIPARAS USING THE MOBILE INTERVENTION IN BREASTFEEDING COUNSELLING**

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*Outi Kanste, RN, PhD, Docent, Research Unit of Nursing Science and Health Management,  
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*Tarja Pölkki, RN, PhD, Professor, Research Unit of Nursing Science and Health Management,  
Faculty of Medicine, University of Oulu, Finland; Oulu University Hospital, Finland*

**Background:** The current recommendations as well as strong evidence of health benefits obligate healthcare professionals to promote, protect and support breastfeeding for the best interest of families. Guidance can affect the realization of breastfeeding. According to earlier studies effective methods of breastfeeding guidance are electronic interventions, such as mobile applications and interactive computer programs, which significantly increased initiation of breastfeeding and the duration of breastfeeding, as well as improved breastfeeding attitudes and confidence in breastfeeding. However, there is little research on the development of mobile interventions and their effectiveness in the obstetric care process in Finland.

**Aim:** The aim of this study was to describe primiparas' experiences of using the mobile intervention in breastfeeding counselling.

**Methods:** The development and testing of the mobile intervention (MIBFc; Mobile Intervention for Breast Feeding counselling) was carried out in co-operation with Oulu University Hospital, the City of Oulu and the company of Buddy Healthcare. The mobile intervention was tested by primiparas women who started using the MIBFc before or after giving the birth in two periods (n=9 in the first period, n=17 in the second period). The participants were recruited from the City of Oulu Maternity Clinic and Oulu University Hospital during 2018–2019. The data were collected using electronic questionnaire with open-ended questions and analyzed with content analyses and statistical methods. At all stages of the study, the principles of research ethics were followed. Study participants signed the consent form and the study had research permits in accordance with the practices of hospital and maternity clinics.

**Results:** The results will be reported at the NJF Congress in Helsinki May 2022.

**Conclusions:** The conclusions are based on results, which are also reported at the NJF Congress in Helsinki May 2022.

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**BACK**

## THE EFFECTIVENESS OF FEX-CAN SEX, A WEB-BASED INTERVENTION TO REDUCE SEXUAL DYSFUNCTION IN CHILDHOOD CANCER SURVIVORS: A RANDOMIZED CONTROLLED TRIAL

Kristina Fagerkvist, RNM, PhD-student, Department of Women's and Children's Health, Karolinska Institutet, Sweden

Claudia Lampic, Lic. Psychologist, Professor, Department of Psychology, Umeå University, Sweden

Lena Wettergren, RN, Professor, Department of Public Health and Caring Sciences, Uppsala University, Sweden

**Background:** Childhood cancer survivors, with an overall survival rate of 85%, is a growing population due to effective treatments. Undergoing treatment for cancer during childhood may have negative consequences on sex life in young adult survivors. Research on eHealth interventions targeting sexual dysfunction in this population is limited. Therefore, we developed a web-based intervention based on the hypothesis that it could reduce negative consequences after cancer treatment during childhood.

**Aim:** To examine the effectiveness of the web-based intervention, Fex-Can Sex.

**Methods:** This randomized controlled trial (RCT) enrolled 278 young adult (aged 19-40) survivors of childhood cancer, 165 women and 113 men, in Sweden identified via the National Quality Registry for Childhood Cancer.

The intervention group (IG) received a 12-week web-based psycho-educational intervention. Participants, intervention-group (IG) and wait-list control group (CG), completed a survey at baseline (T0), directly post-intervention (T1) and three months later (T2).

The primary outcome was the domain 'Satisfaction with sex life' (PROMIS® SexFS version 2.0). Secondary outcomes included domains of SexFS and body image (BIS). Chi-square statistics and t-tests with intention-to-treat analysis were conducted to determine differences between groups and over time.

**Results:** No post-intervention differences with regard to Satisfaction with sex life were detected between IG and CG. However, improvements over time were seen for women in the intervention group regarding vaginal lubrication ( $p=0.028$  at T1 and  $p=0.023$  at T2). Also men in IG improved in Erectile function ( $p=0.002$  at T1) and Body image ( $p=0.047$  at T2).

**Conclusions:** eHealth interventions may be a good complement to standard care of childhood cancer survivors to support sexual health in young adulthood.

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## FREQUENCY OF NORMAL BIRTH AT THE NATIONAL UNIVERSITY HOSPITAL OF ICELAND BEFORE AND AFTER MERGING OF MATERNITY WARDS: A RETROSPECTIVE COHORT STUDY

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*Berglind Hálfhánsdóttir, RN, RM, PhD, Associate Professor, Midwifery Studies, Faculty of Nursing, School of Health Sciences, University of Iceland*

*Ólöf Ásta Ólafsdóttir, RN, RM, PhD, Professor, Midwifery Studies, Faculty of Nursing, School of Health Sciences, University of Iceland*

**Background:** In 2014 the National University Hospital of Iceland (NUHI) merged its Labour and Delivery unit, which provided services for both healthy women and women with risk factors during pregnancy, with a birth unit called “The Nest”, which was a midwifery-led unit for healthy women in normal labour. Countermeasures were implemented since there was a known threat of cultural contamination between the high-risk and normal birth environments. Preservation of midwives’ one-on-one care, systematic containment of unnecessary obstetric interventions through revised protocols, continuing education of staff, and visibility of the rates of intervention and normal birth were carried out.

**Aim:** To assess whether the NUHI’s goal of protecting normal birth rates had been achieved, and to support further development of labour services.

**Methods:** A retrospective cohort study of all women who had singleton births at NUHI labour and delivery units during two 2-year periods, before and after the unit merger, in the years 2012–2013 and 2015–2016. The primary outcome, normal birth rates, was adjusted for confounding variables using logistic regression analysis. Other outcome variables were analysed using descriptive statistics, t-test and Chi-square test.

**Results:** The rate of normal births, both with and without artificial rupture of membranes, increased significantly after the unit merger. The rate of artificial rupture of membranes during labour, uterine stimulation with synthetic oxytocin, episiotomies, and epidural analgesia decreased significantly. On the other hand, the rate of induction increased significantly. There was no significant difference in the rate of 5-minute Apgar scores under 7.

**Conclusions:** This study strongly indicates that it is possible to increase the rate of normal births within an interdisciplinary labour and delivery unit through targeted actions. However, it is necessary to maintain awareness of the possible effects of a high-risk birth environment on normal births.

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## MIDWIVES' THOUGHTS ABOUT WHAT THEY CONSIDER NORMAL BIRTH AND HOW THEY WORK TO PROTECT NORMAL BIRTH

*Pernilla Stenbäck, RM, MSc, Arcada, Finland*

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*Kirsten Hasman, RM, MHealthSc, University College, Copenhagen, Denmark*

*Maria Ekelin, RNM, PhD, Associate Professor, Lund University, Sweden*

*Olof Asta Olafsdottir, RNM, PhD, Professor, University of Iceland, Iceland*

*Eline Skirnisdottir Vik, RNM, PhD, Postdoctoral researcher,*

*Western Norway University of Applied Sciences, Norway*

**Background:** This is a cross-national project within the Nordplus Midwives of the North network, including student midwives and their supervisors in seven countries in Northern Europe (8 institutions). The purpose is to gain knowledge about definitions and ways to protect normal birth in the hospital birth setting. Health professionals perceive normal birth in different ways, but medical interventions have become increasingly common, such as the use of pharmacological pain relief for labor pain, amniotomy, episiotomy and the use of oxytocin for augmentation of labour. This has in many ways been seen as being a normal part of hospital birth with opportunities for woman centred and individualized care lacking.

**Aim:** To explore midwives' thoughts about what they consider normal birth and how they work to protect normal birth.

**Methods:** This is a qualitative project and data is collected by student midwives through semi-structured interviews with midwives working in Northern European countries. Regardless of country, all students use the same semi-structured interview guide. Altogether 16 students and newly qualified midwives are included in the project. In the fall of 2021, more students will join the project. A qualitative content analysis method has been used, and will be used, to analyze the data. The interviews are conducted in the respondents' native language, and the final analytic text will later be translated into the project's common language, English.

**Results:** Preliminary findings from the first interviews in Finland and Sweden show how midwives support normal birth. Both medical and non-medical pain relief used during childbirth was considered a part of normal birth, as well as oxytocin augmentation. However, induction of labour with oxytocin was not seen as a part of normal birth.

**Conclusions:** Conclusions will be presented and discussed at the conference. As far as possible, both supervisors and student midwives will join the conference.

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## THE BIRTHING ROOM AND ITS INFLUENCE ON THE MIDWIVES' PROMOTION OF A NORMAL PHYSIOLOGICAL CHILDBIRTH – A QUALITATIVE INTERVIEW STUDY IN SWEDEN

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*Helena Dahlberg, PhD, Institute of Health and Care Sciences, Sahlgrenska Academy, University of Gothenburg, Sweden*

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**Background:** Women have the right to give birth in a safe and secure environment that supports physiological birth and that allows them to be involved in decision-making regarding their care. Midwives are key professionals caring for women during childbirth.

**Aim:** As part of the Room4Birth project, this study explored how the birthing room influences midwives to support a normal physiological birth.

**Methods:** Using a phenomenological reflective lifeworld approach, individual interviews were carried out with 15 midwives working at four different hospitals in western Sweden. Two of the midwives also assisted at homebirths.

**Results:** Midwives act as guardians for normal physiological birth, and they need to relate to, act, and co-operate with the birthing room. This implies the need for them to adapt, change, reduce, and enhance the physical functions, and to eliminate disturbing activities that occur, both inside and outside the room, and to create a private and emotional safe birthing nest in which the birth bubble remains intact. The birthing room could, by its design, either support their efforts to guard a normal birth or make it more challenging by having a design that mirrored a risk approach to birth. Four opposing constituents complete the essential meaning of the birthing room; midwives need to relate to these in their roles as guardians for normal physiological birth: i) a private or a public room; ii) a home-like or hospital-like room; iii) a room promoting activity or passivity; iv) a room promoting the midwife's presence or absence.

**Conclusions:** The study shows that for midwives working in a hospital setting it is challenging to promote normal physiological birth when the overall maternity services have a risk focus, which is mirrored in the birthing room. The physical design of birthing rooms needs to change in order to better support salutogenically-focused midwifery care.

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## TO ME IT IS NO. 42! EXISTENTIAL ASPECTS IN MOTHER- AND FATHERHOOD TRANSITION BASED ON INTERVIEWS AND A THEATRE WORKSHOP

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*Dorte Hvidtjørn, RM, PhD, Associate professor, Department of Clinical Research, University of Southern Denmark*

**Background:** There are multitudes of existential feelings and considerations around childbirth, with both positive and negative sources of existential meaning; often they are mixed up, but they impact parents' ideas of meaning and purpose in life.

**Aim:** The aim of this study was to explore existential aspects of parenthood transition among new fathers and mothers in view of a potential training programme for professionals in maternity services.

**Methods:** Inspired by action research, data were generated through a user-involving two-phase process consisting of first, 4 focus group-interviews (n=10); and, second, a theatre workshop for parents, health professionals, and researchers (n=40). Between the two phases, case-narratives were constructed based on the interviews and, in collaboration with a dramatist, dramatized and then played at the workshop by professional actors. Data from interviews and the workshop were thematised for further analysis.

**Results:** Five themes were identified: 1. A turning point of what to hold sacred; 2. Changed relationships – guilt and overwhelming love; 3. Awareness of death; 4. Religiousness embodied; 5. What we talk about.

**Conclusions:** Existential aspects of parenthood transition were closely related to meaning in life, changes in relationships, awareness of death and relation to a transcendent belief. Existential aspects were explicated and discussed in nuanced ways expressing existential vulnerability. Therefore, it seems important to both acknowledge and address existential aspects in maternity care, for the simple reason (among others) that they matter to parents. Moreover, addressing existential aspects might enhance a coherent and authentic parenthood transition embedding the paradoxicalities of parenthood transition.

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## CONTINUING BONDS IN BEREAVED PARENTS AFTER LOSS IN PREGNANCY, STILLBIRTH OR NEONATAL DEATH

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**Background:** The importance of continuing bonds after the death of a beloved person has been discussed and explored the last 30 years, with conflicting results. Continuing bonds are a prominent part of parental grieving, but only sparsely researched in the population of parents losing a child in pregnancy, during birth or in the neonatal period.

**Aim:** To describe continuing bonds and grief response, and analyze the association between the two, in parents bereaved during the second and third trimester or neonatally.

**Methods:** We used survey data from the Danish cohort “Life after the loss”, which contains responses from parents bereaved from 14+0 gestational weeks to 4 weeks postpartum. Responses from 848 parents were included. We measured continuing bonds using five single items and grief response using the Perinatal Grief Scale. Associations were analyzed with mixed effects linear regression at 4–8 weeks and 13 months after the loss. All analyses were divided in type of loss.

**Results:** We found that parents who lose in the second and third trimester or neonatally experience a continuing bond to their deceased child. At both time points, parents losing before 22+0 gestational weeks expressed the lowest levels of continuing bonds and the lowest grief scores, and parents losing a newborn expressed the highest levels of continuing bonds and the highest grief scores. Some continuing bonds items were associated with higher grief scores. However, the association were strongest for parents losing before 22+0 gestational weeks and weakest or nonexistent for parents losing neonatally.

**Conclusions:** Our preliminary results indicate differences in the association between continuing bonds and grief according to type of loss. We found that some expressions of continuing bonds were associated to more intense grief, with the effect being strongest for parents losing before 22+0 gestational weeks and weakest for parents losing a newborn.

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## MIDWIVES SUPPORTING BEREAVED PARENTS IN A SPECIALIZED UNIT

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*Tine Brink Henriksen, MD, PhD, Professor, Consultant, Perinatal Epidemiology Research Unit, Clinical Institute, Aarhus University (AU) and Child and Adolescent Medicine, AU Hospital, Aarhus, Denmark.*

**Background:** Parents who experience a perinatal loss are often young and inexperienced with death and bereavement and may rely on staff for adequate and sensitive support and guidance. The attitude of health care professionals may have long-lasting effects on how the parents comprehend the experience. Some research findings suggest that the care for parents who experience a perinatal death should be provided by specifically trained health care professionals experienced in bereavement and grief. However, the care offered to bereaved parents varies from hospital to hospital, even within a small country as Denmark. Bereaved parents are often admitted to the gynaecology, labor, or maternity ward, near pregnant women or live new-born babies and are often discharged within 12 hours after birth.

**Aim:** To identify the characteristics of women who needed an extended stay at a specialized unit for bereaved parents.

**Methods:** A population based descriptive study with information on women admitted to a midwifery led specialized unit for bereaved parents in Denmark, 2012–2018.

**Results:** From January 1, 2012, to December 31, 2018, 579 women were admitted to the unit. Hospitalization varied from one day to one week. In multivariate analyses, we found that the significant characteristics of women with increased length of stay at the unit were primiparity, HR=1.3, 95% CI [1.0,1.7] compared to multiparity, and near-term loss, (HR=2.4, [1.7,3.6] compared to perinatal loss before gestational week 22.

**Conclusions:** Providing unlimited stay at a specialized unit for perinatal loss resulted in variation in length of stay. Primiparous women and women who lost a child closer to term gestation were more likely to stay in the unit for up to 8 days. This may indicate a need for individual support commonly not available in standard care.

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## PEER SUPPORT PROGRAM FOR MOTHERS WITH DISABILITIES: EDUCATING PEER SUPPORT MOTHERS TO SUPPORT THE NEEDS OF NEW MOTHERS WITH DISABILITIES

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Jaana Tiiri, B.Sc.Soc, project coordinator, VEERA-project, Rosette – national association for women with disabilities in Finland

**Background:** According to newest studies in Finland, mothers with disabilities often fail to receive the information and support they need. Birth services lack professional knowledge about disabled mothers' childbirth and different support services. This leads to the responsibility of knowledge sifting to mothers, which cause uncertainty and distrust to childbirth care and the childbirth.

**Aim:** To provide peer support for women with disabilities who plan to have children and new mothers who face struggles with motherhood. VEERA-project also produces a guidebook about childbirth and motherhood of disabled mothers for professionals, disabled mothers and disabled people who plan to have children.

**Methods:** In VEERA-project we train disabled mothers who have expertise by experience to offer peer support to other mothers. In the training the mothers learn how to utilize their experiences and gained knowledge in supporting other mothers and birth service professionals. With the professional knowledge in birth services and added knowledge of experts by experience, new mothers with disabilities could feel safer planning for example their birthing method and motherhood.

**Results:** Peer mother program is being piloted at VEERA-project. We have trained eight mothers to act as peer support for new mothers with disabilities and disabled people who plan to have children. At the training, many mothers brought up that their motivation to the participation in the program came from their experience of being alone and without guidance at the beginning of their motherhood. They said that they didn't receive coherent information from birth service professionals and had hoped to receive peer support and knowledge at the time.

**Conclusions:** Birth service professionals need more knowledge about the childbirth and motherhood of mothers with disabilities. By training peers to act as experts by experience they could help completing the knowledge gap in birthing services and offer support to the new mothers.

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## SOCIODEMOGRAPHIC FACTORS AFFECTING RESPECTFUL CARE, AUTONOMY, MISTREATMENT AND CHILDBIRTH EXPERIENCE

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Kathrin Stoll, PhD, Researcher, University of British Columbia

Franka Cadée, RM, PhD, President, International Confederation of Midwives

Emma M. Swift, RM, PhD, Lecturer, University of Iceland & Reykjavík Birth Center

**Background:** Respectful maternity care maintains dignity, privacy, confidentiality, ensures freedom from harm and mistreatment, and enables informed choice. However, a substantial number of women globally experience disrespectful maternity care and mistreatment from their health care providers.

**Aim:** To evaluate whether sociodemographic factors such as level of education, level of income, migrant background and parity affect women's experiences of respectful care, autonomy, mistreatment and childbirth.

**Methods:** An online survey (in Icelandic, English and Polish) including sociodemographic questions and internationally standardized instruments measuring respect, autonomy, mistreatment and childbirth experience was advertised through social media and distributed using convenience sampling from October 2020 until April 2021. Participants were women who had given birth in Iceland 2015–202 (N=2,367). Data analysis consisted of descriptive analysis, logistic regression and regression models.

**Results:** According to preliminary findings, factors that were associated with significantly lower levels of respectful care were migrant background ( $p<.001$ ), lack of university-level education ( $p=.007$ ), low income ( $p<.001$ ) and primiparity ( $p<.001$ ). Factors that were associated with significantly lower levels of autonomy were lack of university-level education ( $p=.007$ ), low income ( $p=.007$ ) and primiparity ( $p<.001$ ). Migrant women were more likely to report mistreatment during childbirth ( $p<.001$ ). Overall, women reported a positive birth experience ( $M=60.68$ ,  $SD=8.7$ ,  $p<.001$ ).

**Conclusions:** Although the majority of women reported a positive childbirth, the results suggest that inequities exist in the Icelandic maternity care system. Women who lack university education, have low income, are first-time mothers or are migrants are at risk for receiving suboptimal maternity care services. Therefore, it is of major public health importance to optimize care so that all women regardless of income level, education and background have the full potential to experience respectful care, autonomy in decision-making and positive childbirth.

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**012****CANCELLED****013**

## **WOMAN'S POSTNATAL CARING EXPERIENCES AFTER AN EMERGENCY SECTION – A QUALITATIVE STUDY**

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*Bente Dahl, RN, RM, PhD, Professor- Faculty of Health- and Social Science, Institute for Nursing- and Healthscience, Campus Vestfold*

**Background:** A number of studies demonstrate that women are less satisfied with postpartum care than care received during labour and birth. Women who have experienced complicated births or have undergone emergency cesarean sections are particularly vulnerable due to risk of complications.

**Aim:** To explore women's postnatal caring experiences after an emergency cesarean section.

**Method:** A qualitative interview study. A convenience sample consisting of 10 women who had undergone an emergency cesarean section was recruited in 2016. Individual, semi-structured interviews were conducted and systematic text-condensation was used to analyze the data material. The Norwegian Regional Committee for Medical and Health Research Ethics assessed the study and considered it to be outside the remit of the Medical and Health Research Act. Approval was obtained from the Norwegian Centre for Research Data.

**Results:** Four themes were generated from the analysis. The women described their experiences related to both being a mother and being a patient postpartum. They appreciated continuity of care from the midwives, but often experienced being left on their own. They lacked knowledge about their situation, but received little information in the post-natal ward. Consequently, it became important to have their partner present during their stay.

**Conclusions:** The study demonstrates that women experience sub-standard care in the post-natal ward after an emergency cesarean section, challenging patient-safety. Midwives should be attentive to the physical and psychological needs of women who have undergone an emergency cesarean section.

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**BACK**

## THE EXPERIENCE AND NEEDS OF PUERPERAL WOMEN WHO HAVE HAD A CHILD AFTER FOLLOWING ASSISTED REPRODUCTIVE TECHNOLOGIES (ART); A QUALITATIVE STUDY

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**Background:** Nearly 5% of newborns in Europe are nowadays born following Assisted Reproductive Technologies (ART), a steadily increasing number. It is known that during pregnancy, these formal infertile women might have specific experiences such as anxiety and insecurity, and paradoxical needs in maternity care. Little is known about how they experience the first weeks after birth (puerperium).

**Aim:** The aim of this research is to investigate how women who have had a child after ART experience puerperium and what care needs these women have.

**Methods:** From 2017 till 2020, we interviewed sixteen women who had a child after ART. This explorative, qualitative study was based on the constructivist paradigm, using a comparison design.

**Results:** The three themes that emerged from the analysis were 1) the puerperal woman, 2) the caregiver and 3) parenting. The main need of the puerperal women was to be able to talk about their experiences “..when the baby arrived, I just couldn't believe...it was my child”. From the care provider, they needed understanding “She only had to say one sentence...‘so I know it's different for you’ ..”, coordinated information and continuity of care. The processes that underlie this are the transition to parenthood, insecurities “Oh I think it's all scary...”, the unreality “I never learned how to take care of a child because I did not believe that a child would come” and gratitude in having a child.

**Conclusion:** Fertility treatment and the additional uncertainties are mentioned as reasons whether or not to prepare for the puerperium and to have little expectations regarding puerperium. It is important for care providers to be aware of the experiences of the women, to make space for emotions, show understanding and give tailored information and care. In further research, we would like to explore the views of the partners.

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## LEARNING TO BREASTFEED DURING A PANDEMIC

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**Background:** Breastfeeding and breast-milk benefit the health of mothers and their infants in a number of ways. For women to be able to learn and cope with breastfeeding, it is important that they receive support from their partners, and that maternity wards has a structured and positive approach to breastfeeding. The Mother-Baby Friendly Initiative provides a quality standard for postnatal facilities in Norway. The infection control measures that were introduced by the government during the coronavirus pandemic may have affected the breastfeeding assistance provided in postnatal facilities.

**Aim:** To assess first-time mothers' initiation of breastfeeding during a time of changed routines in maternity care services.

**Method:** Descriptive cross-sectional study with a questionnaire to first-time mothers who gave birth between March 12th and May 12th, 2020.

**Results:** We included a total of 821 women in our analyses. Half the sample felt they had received good assistance with breastfeeding. The women received little information and guidance compared to the level expected on a baby-friendly ward. The partner's presence did not influence the level of information the woman received. Those who spent two days in a postnatal facility, received more information and guidance. Almost half the sample had given their babies a breast-milk substitute while in the postnatal facility. This is a larger percentage than what is reflected in Norwegian surveys of infant feeding. Approximately 70 per cent of the surveyed women were exclusively breastfeeding two weeks after giving birth.

**Conclusion:** The support first-time mothers were given during the corona pandemic have not been according to the "Ten steps to successful breastfeeding". Because of this there is reason to assume that the infection control measures have had a negative impact on breastfeeding initiation. The increased use of breastmilk substitutes in this study is the factor that had the greatest impact on exclusive breastfeeding rates two weeks after birth.

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BACK

## CHANGES IN OBSTETRIC INTERVENTIONS AND PRETERM BIRTH DURING COVID-19: A NATIONWIDE STUDY FROM ICELAND

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**Background:** Previous evidence has been conflicting regarding the effect of Covid-19 pandemic lockdowns on obstetric intervention and preterm birth rates. The literature to date suggests potentially differential underlying mechanisms based on country economic setting. We aimed to study these outcomes in an Icelandic population where uniform lockdown measures were implemented across the country.

**Material and methods:** The study included all singleton births (n=20,680) during 2016–2020 identified from the population-based Icelandic Medical Birth Register. We defined two lockdown periods during March-May and October-December in 2020 according to government implemented nationwide lockdown. We compared monthly rates of cesarean section (CS), induction of labor (IOL) and preterm birth during lockdown with the same time periods in the four years prior (2016–2019) using logit binomial regression adjusted for confounders.

**Results:** Our results indicated a reduction in the overall CS rate, which was mainly evident for elective CS, both during the first (AOR 0.71, 95% CI 0.51–0.99) and second (AOR 0.72, 95% CI 0.52–0.99) lockdown periods, and not for emergency CS. No change during lockdown was observed in IOL. Our results also suggested a reduction in the overall preterm birth rate during the first lockdown (AOR 0.69, 95% CI 0.49–0.97) and in the months immediately following the lockdown (June-September) (AOR 0.67, 95% CI 0.49–0.89). The reduction during the first lockdown was mainly evident for medically indicated preterm birth (although not statistically significant) and the reduction during June-September was mainly evident for spontaneous preterm birth.

**Conclusions:** This study suggested a reduction in elective CS during Covid-19 lockdown, possibly reflecting changes in prioritization of nonurgent health care during lockdown. We also found a reduction in overall preterm birth during the first lockdown and spontaneous preterm birth following the first lockdown, but further research is needed to shed light on the underlying mechanisms for these findings.

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BACK

## QUALITY OF FACILITY-BASED MATERNAL AND NEWBORN CARE IN NORWAY DURING THE COVID-19 PANDEMIC: A CROSS-SECTIONAL STUDY

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**Background:** When COVID-19 hit Europe in March 2020, most countries, including Norway, implemented strict measures to reduce the risk of infection. It is important to understand how women experienced giving birth during COVID-19 to expose negative experiences due to existing measures, but also to build knowledge on how the effect of these measures influence one of the most vulnerable and important periods in a human life.

**Aim:** To describe how women in Norway who gave birth during the COVID-19 pandemic experienced care at birth facilities.

**Methods:** This is a cross-sectional study, and we followed the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guideline. The study is part of a multi-country survey in the World Health Organisation (WHO) European Region to collect views of women on the in-hospital quality of maternal and newborn care (QMNC). The international study was approved by the Institutional Review Board of the coordinating centre: the IRCCS Burlo Garofolo Trieste (IRB-BURLO 05/2020 15.07.2020). For the national study, the study protocol was presented to the REK Regional Committees for Medical and Health Research Ethics and considered to be outside the remit of the Norwegian Act on Medical and Health Research (2020/213047).

**Results:** Regarding Norway, 3312 women who gave birth in Norway answered the questionnaire. Results are preliminary and will be presented at the conference.

**Conclusions:** The conclusions are preliminary and will be presented at the conference.

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## LARGE GAPS IN THE QUALITY OF HEALTH CARE PROVIDED TO MOTHERS DURING THE COVID-19 PANDEMIC IN SWEDEN: A CROSS-SECTIONAL STUDY BASED ON WHO STANDARDS

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**Background:** Maternal experience of childbirth is multidimensional and is influenced by a variety of factors.

**Aim:** To report maternal childbirth experience as described by the women themselves during the COVID-19 pandemic in Sweden using a WHO Standards-based tool adapted for an online survey (Quality of maternal and newborn care-QMNC). This study is part of a multinational, European study Improving Maternal Newborn Care in Europe (IMAgINE-Euro).

**Methods:** Women  $\geq 18$  years of age who gave birth from March 1, 2020 to June 30, 2021 were asked to give voluntary consent to participate in an online survey. The survey included 40 questions on four key domains: provision of care, experience of care, availability of human and physical resources and organisational changes due to COVID-19.

**Results:** In all, 5003 women were included in the analysis. Among those who underwent labour (n=4528), 46.7% perceived a reduction in QMNC due to the COVID-19 pandemic, 50.7% were not allowed a companion of choice, 62.5% reported that health workers were not always using protective personal equipment and 36.5% rated the number of health workers as "insufficient". Fundal pressure was applied in 22.2% of instrumental vaginal births and 36.8% received inadequate breastfeeding support. In addition, 18.4% of women did not feel treated with dignity and 6.9% reported some form of abuse. Findings were significantly worse among women who did not undergo labour (n=475).

**Conclusions:** Swedish mothers' satisfaction of care provided during childbirth was strongly influenced by many variables. Actions to promote high-quality, evidence-based, patient-centered respectful care for all mothers and newborns are urgently needed.

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## THE MIDWIFERY PROFESSION AND QUALITY MIDWIFERY CARE IN BANGLADESH DURING THE COVID-19 PANDEMIC - A FOCUS GROUP DISCUSSION INQUIRY WITH MIDWIVES AND MIDWIFERY EDUCATORS

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**Background:** Quality midwifery care plays an important role for decreases in maternal mortality and morbidity. In recent years significant development of the midwifery profession has been made in Bangladesh. Quality midwifery care can however be held back by social, cultural and economic barriers and the Covid-19 pandemic has had severe impact on society and regional healthcare systems including reproductive, perinatal and maternal health.

**Aim:** The aim of the study is to describe the possibility to provide quality midwifery care in Bangladesh during the Covid-19 pandemic from the perspective of clinical midwives, nurses in midwifery care and midwifery educators.

**Methods:** Data was collected through internet-based focus group discussions with clinically active midwives and nurses, and midwifery teachers. Thematic analysis inspired by Braun and Clark was used to analyze data.

**Results:** The impact of Covid-19 on midwife's health, safety and ability to provide quality care can be seen in three perspectives comprising three main themes with sub-themes. From a socio-cultural perspective, social views of Covid-19 jeopardize the security and health of midwives and lockdown reinforces gender inequalities. From a professional perspective it is visible how low professional status place midwives in challenging situations, how deficient implementation of policies compromises patient safety, and how increased workload for midwives endangers quality care. Seen from an economic perspective, poverty in society aggravates midwifery practice and inadequate means of compensation creates despair.

**Conclusion:** The Covid-19 pandemic reinforces preexisting barriers but implies also new factors influencing the possibility to provide quality midwife care. In the wake of the pandemic these factors along with a sustainable plan for educating new midwives needs to be addressed. This is urgent, in order to ensure further provision of professional midwives and quality midwifery care in Bangladesh.

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## WORKING CONDITIONS FOR HOSPITAL-BASED MATERNITY AND NEONATAL HEALTH CARE WORKERS DURING EXTRAORDINARY SITUATIONS – A PRE-/POST COVID-19 PANDEMIC ANALYSIS AND LESSONS LEARNED

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**Background:** The COVID-19 pandemic has challenged health care workers in an unprecedented way and will most likely affect their well-being and mental health for a long time after the pandemic.

**Aim:** To investigate how the working environment for hospital-based maternity and neonatal health care workers have been affected by the COVID-19 pandemic and to identify preventive measures.

**Methods:** We performed a document analysis of implemented changes in working routines during the COVID-pandemic, a quantitative analysis of a COVID-19 survey compared with a pre-survey and a qualitative analysis of answers to open-ended survey questions.

**Results:** A total of 382 health care workers completed the COVID-19 survey (35% response rate) and 660 the pre-survey (74% response rate). Lack of personal protective equipment, worry of becoming infected, uncertainty whether implemented changes were enough and difficulties in communicating updated routines had negative effects on working conditions. Team spirit and feeling valued by peers had a positive effect.

**Conclusions:** The results suggest how negative effect on health care workers health can plausible be prevented in future situations; to create a work climate that acknowledge the

employees worry for being infected, to secure adequate pre-conditions for the managers, to create a strong psychosocial safety climate and systematically improve the working conditions for the health care workers, and to maintain the positive effects of increased team spirit and feeling valued by peers.

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## DISRUPTION OF PHYSIOLOGICAL LABOUR AMONG NULLIPAROUS WOMEN AT TERM

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**Background:** Interventions in pregnancy and childbirth aimed to be lifesaving or health-promoting, may in some cases be harmful when used routinely in otherwise healthy women due to the inherited short- and long-term risk of adverse effects. Globally, there is a shift in the health agenda from the narrow scope of survival to a wider focus including drivers for thriving and transformation during childbirth.

**Aim:** To describe and analyse the use of interventions in childbirth in Denmark over almost two decades (2000–2017), and to examine the extent to which contemporary care adheres to current international recommendations towards restricted use of interventions.

**Method:** A national Danish register-based cohort study including all nulliparous women with term, singleton pregnancies with a foetus in cephalic presentation laboring between the years 2000 and 2017 (n=380,326 births). Multivariate regression analyses with adjustment for change in population were performed. Main outcome measures: Induction of labour, epidural analgesia, and augmentation of labour.

**Results:** Between 2000/2001 and 2016/2017, induction of labour increased from 5.1% to 22.8%, AOR 4.84, 95% CI [4.61–5.10], epidural analgesia from 10.5% to 34.3% (AOR 4.10, 95% CI [3.95–4.26]), and augmentation of labour decreased slightly from 40.1% to 39.3% (AOR 0.84, 95% CI [0.81–0.86]). Having more than one of the three mentioned interventions increased from 12.8% in to 30.9%.

**Conclusions:** The number of interventions increased during the study period as well as the number of interventions in each woman. As interventions may interfere in physiological labour and carry the risk of potential short- and long-term consequences, the findings call for a careful re-evaluation of contemporary maternity care with a “first, do no harm” perspective.

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BACK

## A QUALITATIVE STUDY OF WOMEN'S EXPERIENCE OF LABOUR INDUCTION FOR WOMEN PARTICIPATING IN A STUDY COMPARING INDUCTION IN LATE- AND POSTTERM PREGNANCY

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**Background:** There is an increasing trend to induce labour in women in late term pregnancies. However, there is limited knowledge of women's experience of induction in late- and postterm pregnancy.

**Aim:** To gain a deeper understanding of women's lived experiences of labour induction in late- and postterm pregnancies.

**Methods:** Women were recruited as a subgroup to the SWEdish Postterm Induction Study (SWEPIIS), in which participants were randomised to either induction of labour at 41 gestational weeks or to expectant management until 42 gestational weeks. In total, 12 women were interviewed about their experience of labour induction one and a half to three months after birth. We used phenomenology with a reflective lifeworld approach as method for the analysis.

**Results:** The results describes how the women adopted and adjusted to the new conditions for their labour. It was expressed as a relief to have a planned date for the birth, as they now knew when and where the birth would start. It was a strange feeling being at the labour ward not having contractions, enabling them to see the environment from a different view. The women trusted the maternity personnel to know best practise and handed themselves over letting the staff control the process of labour. However, they reflected on how the induction might have effected their childbirth and childbirth experience. In the end, the experience of labour induction was overshadowed by the life-changing and existential experience of birth.

**Conclusions:** The results reflect a medicalised view of childbirth. It is a challenge for maternity care providers, as the induction per se is an intervention, to support normal progress in induced labour and facilitate for women to make informed choices and decisions.

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## INDUCTION OF LABOUR FOR NON-MEDICAL REASONS, AND ITS IMPACT ON MATERNAL AND CHILD'S HEALTH, A 16 YEAR AUSTRALIAN POPULATION BASED LINKED-DATA STUDY

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**Background:** Rates of induction of labour (IOL) are rising globally whereas scientific literature is inconclusive about the impact of IOL on maternal and child's health.

**Aim:** We compared intrapartum interventions and outcomes for mothers, neonates, and children up to 16 years, for induction of labour (IOL) versus spontaneous labour onset in uncomplicated term pregnancies with live births.

**Methods:** We used population linked data from New South Wales, Australia (2001-2016) for healthy women giving birth. Descriptive statistics and multivariable logistic regressions were performed for intrapartum interventions, maternal and (long-term) child's outcomes.

**Results:** Of 474,652 included births, 69,397 (15%) had an IOL for non-medical reasons. Primiparous women with IOL vs spontaneous onset differed significantly for: spontaneous vaginal birth (42.7% vs 62.3%) instrumental birth (28.0% vs 23.9%) intrapartum caesarean section (29.3% vs 13.8%), epidural (71% vs 41.3%), episiotomy (41.2% vs 30.5%), and postpartum haemorrhage (2.4% vs 1.5%). There was a similar trend in outcomes for multiparous women, except for caesarean section which was lower (5.3% vs 6.2%). For both groups, 3rd and 4th degree perineal tears were lower overall in the IOL group: primiparous women (4.2% vs 4.9%); multiparous women (0.7% vs 1.2%), though overall vaginal repair was higher (89.3% vs 84.3%). Following induction, incidences of neonatal birth trauma, resuscitation, and respiratory disorders were higher, as were admissions to hospital for infections up to 16 years. There was no difference in hospitalisation for asthma or eczema, or for neonatal death, or in total deaths up to 16 years.

**Conclusions:** Induction of labour for non-medical reasons was associated with higher birth interventions, particularly in primiparous women, and more adverse maternal, neonatal, and child outcomes for most variables assessed. The size of effect varied by parity and gestational age, making these important considerations when informing women about the risks and benefits of IOL.

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## ROUTINE INDUCTION IN LATE-TERM PREGNANCIES: FOLLOW-UP OF A DANISH INDUCTION OF LABOUR PARADIGM

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**Background:** There is an association between prolonged pregnancies and fetal and maternal morbidity. This founds the rationale for offering routine induction at some timepoint after estimated due date, but the timing varies between countries. For many years, routine induction of labour at gestational week 42+0 has been recommended in Denmark. In 2011, a more proactive protocol was introduced aimed at reducing stillbirths, and practice changed into earlier routine induction, i.e. between 41+3 and 41+5 GW.

**Aim:** To evaluate a national change in induction of labour regime.

**Method:** A national retrospective register-based cohort study were performed. All births in Denmark 41+3 to 45+0 GWs between 2000 and 2016 (N=152 887) were included. The primary outcomes of interest: stillbirths, perinatal death, and low Apgar scores. Additional outcomes: birth interventions and maternal outcomes. The trend of maternal and neonatal consequences was monitored in the preintervention period (2000–2010) compared with the postintervention period (2012–2016) using Interrupted Time Series Analysis.

**Results:** For the primary outcomes, no differences in stillbirths, perinatal death, and low Apgar scores were found comparing the preintervention and postintervention period. Of additional outcomes, the trend changed significantly postintervention concerning use of augmentation of labour, epidural analgesia, induction of labour and uterine rupture (all  $p < 0.05$ ). There was no significant change in the trend for caesarean section and instrumental birth. Most notable for clinical practice was the increase in induction of labour from 41% to 65% ( $p < 0.01$ ) at 41+3 weeks during 2011 as well as the occurrence of uterine ruptures (from 2.6 to 4.2 per thousand,  $< 0.02$ ).

**Conclusions:** Evaluation of a more proactive regimen recommending induction of labour from GW 41+3 compared with 42+0 using national register data found no differences in neonatal outcomes including stillbirth. The number of women with induced labour increased significantly as well as uterine ruptures.

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## A DECISION-MAKING TOOL ON ROUTINE LABOUR INDUCTION FOR WOMEN WHOSE PREGNANCY IS IN THE LATTER PART OF THE TERM PERIOD

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**Background:** Deciding whether to have your labour induced is a choice faced by many pregnant women. Women's expectations and preferences are, however, generally not met when it comes to the decision processes preceding the induction. Lack of informed decision-making is a documented barrier for optimal care. In 2016, we evaluated IOL-leaflets from Danish maternity units according to the International Patient Decision Aids Standards (IPDAS). Criteria for patient involvement and informed consent were largely unmet, and the Danish Health Authority requested that all units reviewed/improved their information material. At the same time, another research group was able to identify one PDA (from Queensland, Australia) that met the IPDAS criteria almost completely among all online accessible material in English or German.

**Aim:** To present a proposal for a decision aid for women in pregnancy week 41+, who must decide on routine labour induction.

**Methods:** We took the Australian PDA as our starting point and further developed it according to the following criteria: The decision aid must (1) adhere to international quality criteria (IPDAS), (2) be well adapted to a Danish context, and (3) be immediately useable.

**Results:** We developed a decision aid, that lives up to the major IPDAS themes, i.e. with a clear statement of aims, unbiased and detailed information about options, probabilities of outcomes presented in an understandable way, accurate information, disclosure of conflicts of interest, a clear structure and layout, and information that helps the reader judge its reliability and make appropriate decisions. Adaption to a Danish context regarded e.g. routines in clinical practice and choice of references. Finally, the aid was prepared so that it speaks directly to the user (the pregnant woman).

**Conclusions:** Traditional patient information may soon be history, and we must learn to use, and develop, tools that support people making their own decisions.

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## SWEDISH MIDWIVES' AND GYNAECOLOGISTS' ATTITUDES TO SEXUAL AND REPRODUCTIVE HEALTH AND RIGHTS AND GENDER EQUALITY

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**Background:** By international comparison, people in Sweden display the most liberal and individualistic values on sexual and reproductive health and rights (SRHR) matters. Sexual and reproductive health services, including abortion and contraceptive counselling for youth and adults, are potential contentious spaces and sources of conflicts between private and professional values in a multicultural society.

**Aim:** To investigate self-expressed values in relation to SRHR and gender equality among Swedish HCPs in reproductive healthcare in comparison with the Swedish population.

**Methods:** A national cross-sectional study was carried out. The questionnaire was distributed in January-May 2021 through a non-probability sample to physicians, midwives/nurses and hospital social workers (n=1257) through professional associations for midwives and gynaecologists, and the target population's workplaces. Through descriptive statistics, we mapped HCPs' values, and compared HCP data to World Values Survey/ European Values Survey data, which is representative for the Swedish population.

**Results:** HCPs displayed homogeneous values, which centred on extreme values. The vast majority responded that homosexuality, abortion, divorce and sex before marriage can always be justified. HCPs' self-expressed values in all occupational groups were very permissive in SRH matters and very restrictive against domestic violence and spanking children. There was even less variation in gender equality norms, which centred on the most liberal value. Compared to the Swedish population, HCPs had even more liberal values, particularly about abortion. Also compared to a sub-population of highly educated women, HCPs had more liberal values about abortion and gender equality, and were to lesser extent religious community members.

**Conclusions:** Providers in Swedish reproductive health services are encouraged to incorporate gender equality perspectives in their daily practice. Our results show that Swedish midwives, gynaecologists and hospital social workers share a strong ideology of gender equality, and are homogeneous in their secular liberal values in relation to SRHR and gender equality.

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## ROLE OF MIDWIVES IN PREVENTION AND CARE OF THE SURVIVORS OF FEMALE GENITAL MUTILATION/ CUTTING (FGM/C)

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**Background:** FGM/C is a violation of human rights and can cause negative health effects. There is an estimation of approximately 10,000 survivors of FGM/C and 650–3,080 girls at risk in Finland in 2019 but exact numbers are missing. To target preventive measures correctly and to improve the care of survivors of FGM/C, data on prevalence of FGM/C is crucial. The Finnish National Action plan for the prevention of FGM/C (2019) guides the preventive work and instructs also the work of midwives.

**Aim:** To gather recent Finnish research data on the prevalence of FGM/C and to describe how midwives can improve the health of the FGM/C survivors.

**Methods:** A review of the latest data on the prevalence of FGM/C in Finland conducted by THL and on the preventive measures taken on a national level.

**Results:** In the latest survey the study group of female foreign-born population in Finland had FGM/C prevalence of 2.4% (FinMonik 2020). Finnish Medical Birth Register showed FGM/C prevalence of 0,5% among the parturients in Finland in 2020.

In Finland, preventive work is carried out at the national level by sharing information and training professionals. Finland is considering a legislative reform to achieve a more comprehensive ban on FGM/C. In Finland, referral to defibulation and reconstructive surgery has also been intensified.

**Conclusions:** Midwives play a very central role in identifying FGM/C and recording the information up in the national birth register. Midwives provide care and support for survivors before, during and after childbirth and share information about the disadvantages of the tradition to safeguard girl children. With the routinely collected register data supplemented with survey data on FGM/C we can get better understanding of the prevalence of FGM/C in Finland. Also, the national action plan additionally with the ongoing legislative reform can help guide preventive work properly.

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## BIRTH OUTCOMES OF WOMEN REPORTING A HISTORY OF VIOLENCE INCLUDING DOMESTIC VIOLENCE DURING PREGNANCY: A LONGITUDINAL COHORT STUDY

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**Background:** Victimization of women is encountered in all countries across the world, it damages the mental and physical health of women. During pregnancy and the postpartum period, women are at a greater risk of experiencing violence from an intimate partner.

**Aim:** The aim of this study was to explore childbirth outcomes in a Swedish population of women reporting a history of violence including domestic violence during pregnancy.

**Methods:** A longitudinal cohort design was utilised. In total 1939 pregnant women  $\geq 18$  years were recruited to answer two questionnaires, during early and late pregnancy. The available dataset included birth records of 1694 mothers who gave birth between June 2012 and April 2014. Statistical analyses included descriptive statistics, T-test and bivariate logistic regression.

**Results:** Of 1694 mothers 38.7% (n=656) reported a history of violence and 2% (n=34) also experienced domestic violence during pregnancy. Women who were single, living apart from their partner, were unemployed, had financial distress and were smokers were at a higher risk of experiencing violence (p=0.001). They also had significant low scores on the SOC-scale and high EDS-scores  $\geq 13$  (p=0.001) when compared to women without a history of violence (p=0.001). Having a history of violence increased a woman's risk of having caesarean section (OR 1.33, 95% CI 1.02 -1.70). Likewise, a history of emotional abuse, significantly increased the risk of having

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a caesarean section irrespective of whether it was planned or an emergency caesarean section (OR 1.50, 95% CI 1.09-2.06). Infants born to a mother who reported a history of violence, were at significant risk of being born premature < 37 weeks of gestation compared to infants born by mothers with no history of violence ( $p=0,049$ ).

**Conclusions:** A history of violence and exclusively a history of emotional abuse has a negative impact on childbirth outcomes including caesarean section and premature birth. Therefore, early identification of a history of or ongoing violence is crucial to provide women with extra support which may have positive impact on birth outcome.

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## INTIMATE PARTNER VIOLENCE AND THE ASSOCIATION OF PREGNANCY INTENDEDNESS – A CROSS-SECTIONAL STUDY IN SOUTHEASTERN NORWAY

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**Background:** Unintended pregnancy in the context of intimate partner violence (IPV) is a public health issue. One in three women have experienced IPV some time during their life. IPV is associated with increased health risks for women and their infants and pregnancy does not protect them from the adverse outcomes of IPV.

**Aim:** To investigate the association between unintended pregnancy and emotional, physical, and sexual IPV among culturally diverse women attending routine antenatal care.

**Methods:** A prospective cross-sectional study of 1788 pregnant women who filled out a questionnaire during pregnancy as part of a randomized controlled trial conducted in southeastern Norway. Pregnancy intendedness was measured by asking women if their pregnancy was planned or not. The Abuse Assessment Screen and the Composite Abuse Scale SF-R, consisting of descriptive questions, were used to measure IPV. Chi-square tests, a Mann-Whitney U test, and binary logistic regression analysis were used.

**Findings:** Almost one in five women (17.4%) reported that their current pregnancy was unintended. Women with unintended pregnancy were significantly younger, had lower educational backgrounds, more limited economic resources and were more likely to be non-native Norwegian speakers. A total of 15.3% of the women reported some experience of IPV

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in their lifetime. These women were significantly more likely to experience an unintended pregnancy than women who had not experienced IPV, after adjusting for confounding factors: AOR=1.74 (95% CI [1.23–2.47]).

**Conclusions:** Women who had experienced IPV were significantly more likely to have an unintended pregnancy than women who had not experienced IPV. It is of major importance to identify those women and offer appropriate services during pregnancy.

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## MATERNITY WARD CUSTOMERS WITH INTIMATE PARTNER VIOLENCE EXPERIENCES

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**Background:** Intimate partner violence (IPV) is part of societal, social and human health issues. Pregnancy increases women's risk of being exposed to IPV that affects well-being of both women and fetuses. This study was part of the Violence Intervention in Special Health Care Project (VISH) in EU Daphne III-Programme 2009–2010.

**Aim:** First, pregnant women's experiences of IPV and its impact on their well-being and safety are described. Second, to assess the need for additional care for women and the same topic from the perspective of midwifery professionals.

**Method:** The data were collected through interviews with 867 women at the maternity ward of the Central Hospital of Central Finland in 2010–2011. Statistical methods and content analysis were utilized to analyze the data.

**Results:** Nearly a third of women had experienced IPV, which occurred primarily in the form of mental, physical, and sexual violence. Experienced IPV and a sense of well-being and security were inversely correlated. Aftercare was considered inadequate.

**Conclusions:** The results revealed the recurrence and continuity of IPV as well as the invisibility of the phenomenon. Systematic IPV screenings were found to be effective since the IPV experiences would not have been exposed without specific questions that targeted this issue. The prevalence of intimate partner violence during pregnancy and its impact on pregnancy outcomes is currently being further investigated in a new research project.

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## THE CURRENT STATE OF PROFESSIONALISATION OF MIDWIFERY IN EUROPE

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**Background:** Throughout Europe midwives called for increasing professionalisation of midwifery during the 1980s and 1990s. While the Bologna Declaration (1999) supported this development in education and research, it remains unclear how other fields, such as practice, have fared so far.

**Aim:** This study aimed to explore the current state of professionalisation of midwifery in Europe.

**Methods:** An exploratory inquiry with an on-line semi-structured questionnaire. Its content was based on Greenwood's (1957) sociological criteria for a profession. Descriptive statistics and thematic content analysis were used to analyse the data. Participants were national delegates from member countries to the European Midwives Association.

**Results:** Delegates from 29 European countries took part. In most countries, progress towards professionalisation of midwifery has been made through the move of education into higher education, coupled with opportunities for postgraduate education and research.

Lack of progress was noted in particular in regard to midwifery practice, regulation, and leadership in health care provision and education. Most countries had a code of ethics for midwives as well as a midwifery association. Based on organisational collaborations with other disciplines, the sustainability of a distinct professional culture was unclear. An increased focus on future development of midwifery practice was called for.

**Conclusions:** Progress in midwifery education and research has taken place. However, midwives' current roles in practice as well as leadership and their influence on health care culture and politics are matters of concern. Future efforts for advancing professionalisation in Europe should focus on the challenges in these areas.

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## AUGMENTED REALITY (AR) BASED TRAINING – RESUSCITATION OF A NEWBORN

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**Background:** During midwifery education it is crucial to learn appropriate and effective management of obstetric and paediatric emergencies. About 95% of newborns adapt well after birth. Nevertheless, in the event of unexpected adaptation disorders, action must be taken immediately to avoid life-threatening or organ compromising hypoxia. The use of AR offers the potential to create an expanded, simulation-based training.

**Aim:** The aim is to improve the practical skills and abilities, to consolidate the courses of action in accordance with the European Resuscitation Council guideline on neonatal resuscitation and to support the theory-practice transfer as well as self-directed learning of midwifery students under plannable and safe conditions.

**Methods:** As part of the design-based research method, the teaching/learning concept and the technical application are tested and formatively evaluated. The results are incorporated into the re-design.

**Results:** The results will be presented in the Congress. The preliminary results are as follows: The AR scenario "Resuscitation of a newborn" is implemented on a smartphone under realistic conditions in the skills-lab. To re-enact this situation, symptoms of the newborn are simulated on the smartphone, the associated movement courses of action are shown and decision parameters are displayed. The AR scenario is embedded into the bachelor curriculum. The students are able to increase their competencies in terms of theoretical knowledge, practical skills and their own sense of security during their practicals on the labour ward.

**Conclusions:** AR enables contextual learning as well as practising practical skills at an early stage of midwifery education under safe conditions. It thus stimulates more efficient, practice-oriented and self-directed learning.

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## ENHANCING LEADERSHIP IN MIDWIFERY CURRICULUM ON PROMOTING NORMAL BIRTH

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**Background:** Leadership is partly taught in the current midwifery curriculum in the Netherlands and Iceland, mostly in the context of management. Leadership skills in advocacy, empowerment, and promotion of physiological childbirth are not defined within the curriculum.

**Aim:** The aim of this subsection of the Twinning-Up-North cultural collaboration between the Dutch and Icelandic midwifery associations was to develop a new midwifery education module on leadership and strengthen midwifery leadership skills.

**Methods:** A qualitative study on the views of midwifery students and their ideas on gaps in leadership education. Focus group and in-depth interviews were performed in three different midwifery schools in four settings in Groningen, Rotterdam, Amsterdam, and Reykjavik, and analysed using grounded theory. A new education module of 0.5–1 ECTS was designed, based on study findings and relevant literature.

**Results:** The study results have three overarching themes: “The need for leadership to promote physiological birth”; “Helping and hindering factors influencing leadership”; and “The role of education in leadership”. The new education module based on these findings includes: lectures on leadership, advocacy, empowerment and feminism; lectures and role playing exercises on persuasion in rhetorical situations; online and on-site role model lectures; and references to websites and electronic media. The midwifery schools have pilot tested and implemented either the whole module or a part of it, as fits their previous education curriculum.

**Conclusions:** New education modules can be the first step in a domino effect leading to women’s empowerment and enhancement of midwives’ leadership skills in promoting physiological birth. Enhancing leadership in student midwives will provide midwifery leaders for the future.

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## IMPLEMENTING POSTPARTUM HAEMORRHAGE SIMULATION IN THE MIDWIFERY CURRICULUM

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**Background:** Postpartum haemorrhage (PPH) is an acute complication that may occur after any delivery. It is a potentially life threatening condition which requires appropriate teamwork from health professionals. We integrated simulation-based education and learning (SBEL) on handling PPH, hypothesizing this would strengthen the students’ action competence, clinical skills and confidence.

**Aim:** To evaluate the implementation of our PPH simulation set-up with focus on learning potentials and students' learning outcomes.

**Methods:** Post-simulation questionnaires were completed by 129 2nd year midwifery students from 2017 to 2020. The questionnaire addresses learning potentials in the simulation setting, the understanding of cross-professional collaboration, PPH-skills and satisfaction with the set-up and implementation. Twelve students at a time meet at the simulation delivery suite and settle with Noelle, a computer-driven high fidelity mannequin, who responds physiologically to their actions.

After a thorough introduction 4 students act a 15 minute atonic scenario, playing the roles as midwife, doctor and two assistants, and the rest watch the live-streaming next door. After each scenario we conduct a 30 minute feedback. We conduct the scenario three times so that each student will act the scenario once, watch twice and participate in three feedback sessions.

**Results:** Among the learning outcomes the contribution to the students' sense of confidence in their following clinical practice was rated to a moderate to high degree by 99% (123/125).

The students rated the simulation to contribute to their cross-professional collaboration to a moderate or high degree in 98% (126/129) of the answers.

Also, a majority, 94% (119 /127), found that the simulation contributed to their knowledge on how to administer medications in treating PPH to a moderate to high degree.

**Conclusion:** Data showed that the students rated the simulation profitable. Overall the method of SBEL seems to utilize and develop the students' knowledge and potentials to a substantially higher degree than ordinary faculty lectures.

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## IMPLEMENTATION OF A PROCESSORIENTED REFLECTION MODEL FOR HEALTHCARE PROFESSIONALS TO IMPROVE QUALITY OF INTRAPARTUM CARE IN DEMOCRATIC REPUBLIC OF CONGO

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**Background:** As part of a 3-pillar training program aiming at contributing to sustainable quality improvement of intrapartum care in an urban health zone in eastern Democratic Republic of Congo (DRC), one pillar consisted of process-oriented group reflections following a model designed in a Swedish context and tested for feasibility in an earlier in-service training for midwives.



**Aim:** To describe the implementation process and outcome of using the process-oriented reflection model, for multi-professional healthcare provider working at labour wards at healthcare facilities.

**Methods:** Data were collected through focus group discussions (n=18) and interviews (n=2) during (totally 52 participants) and after the training intervention (totally 59 participants). A content analysis was undertaken guided by a framework for conducting and reporting process evaluation.

**Results:** Four professionals were trained to become master trainers for a six months training intervention at seven selected health facilities. Pillar three consisted of reflection group sessions of 1,5 hours once a month with staff at respective facility held by one master trainers. The participants experienced the reflection model to be innovative. It had developed the individual's ability to reflect on and share own experienced care situations in a safe environment, and where feedback has been given in a non-judgmental manner. It had also contributed to improved intercollegiate teamworking in daily care practice. All together it had contributed to improved routines to manage labour in normal, and especially complicated care situations.

**Conclusions:** The study shows that conducting process-oriented group reflections following a structured model, was found to be very useful. Nobody of the participants had participated in such or similar reflection groups before and they suggested that it should be introduced everywhere in healthcare facilities in eastern Congo, nationally and elsewhere, as a mean to strengthen professional identity, self- confidence and inter professional teamwork.

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## PRECONCEPTION FEAR OF CHILDBIRTH: EXPERIENCES AND NEEDS OF WOMEN FEARING CHILDBIRTH WHILE NOT PREGNANT

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**Background:** Although early case studies indicated that fear of childbirth can predate a woman's first pregnancy, almost all research initiatives on fear och childbirth have focused on pregnant women. The concept of preconception fear of childbirth is largely unexplored, but a few studies focusing on non-pregnant female students estimated that 26–27 percent had elevated levels of fear of childbirth. To date, there are no studies exploring the experiences of women with preconception fear of childbirth.

**Aim:** To give voice to the experiences of non-pregnant women with fear of childbirth.

**Methods:** We conducted semi-structured interviews with nine non-pregnant women who had never given birth and were hesitant to become pregnant due to fear of childbirth. The transcripts were analyzed using reflexive thematic analysis.

**Results:** All women in this sample wanted to have children, but were highly afraid of giving birth. The women perceived childbirth as an extremely risky event and doubted their abilities to handle it. Despite expressing a strong wish for professional support, they all described very

limited opportunities to receive support from maternal care services. They felt abandoned, left on their own in a stressful and constantly ongoing negotiation with themselves, feeling the pressure to decide whether to dare to become pregnant or not.

**Conclusion:** Women's experiences of fear of childbirth prior to a first pregnancy seem similar to the experiences reported from pregnant women in many ways. Unlike pregnant women, women in this group lack support from maternal care services. Oftentimes, these women are left on their own, trying to decide whether to dare to become pregnant or not. An increased awareness of women with preconception fear of childbirth is needed and we encourage maternal care services to consider their opportunities to offer them their support.

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## THE TRAJECTORY OF FEAR OF BIRTH DURING AND AFTER PREGNANCY IN WOMEN LIVING IN A RURAL AREA FAR FROM THE HOSPITAL AND ITS LABOUR WARD

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**Background:** There is a growing interest in fear of birth. The prevalence, reasons and treatment have been investigated, but the development of fear of birth during and after pregnancy in a sample of women from a rural area is less studied.

**Aim:** To explore the trajectories of fear of birth and associated factors in a sample of women living in a rural area of Sweden.

**Methods:** A longitudinal cohort study of women recruited to a continuity-of-care project in mid-pregnancy and followed up two months after birth. Data were collected by two questionnaires. Fear of birth was assessed using the Fear of Birth Scale (FOBS) in mid-pregnancy, in retrospect after birth and looking forward to a possible future birth.

**Results:** The questionnaire was completed by 280 women in mid-pregnancy and by 236 women after giving birth. The mean FOBS fluctuated over time: it was highest in pregnancy, lower after birth and then increased once more when thinking about a future birth. Factors associated with developing fear after birth were mainly related to having had an emergency caesarean section, epidural, augmentation, or neonatal care that resulted in a less positive birth experience. Reduction of fear was associated with antenatal support. For some women, the levels of fear did not change, and these women were characterized with worse self-rated health but also more negative experiences of having given birth.

**Conclusion:** Fear of birth seemed to change over time and was associated with women's emotional well-being, circumstances accompanying the actual birth and the whole birth experience. Support during pregnancy could change the trajectory of fear of birth. Women whose levels of fear were high rated their health lower and had a more negative birth experience. More research is needed into how best to help women overcome their fear of birth.

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## HELPING FACTORS AND DESIRED SUPPORT FROM PROFESSIONALS FOR MULTIPARAS WITH FEAR OF CHILDBIRTH

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**Background:** Fear of childbirth has increased in Finland during the past decade. The prevalence and the severe consequences of fear have been recognized, but no evidence-based treatment is available.

**Aim:** To describe helping factors and desired support from professionals for multiparas with fear of childbirth.

**Methods:** The research request was represented on closed pregnancy and childbirth related Facebook's discussion groups and internet forums. The data was collected with an electronic questionnaire from pregnant multiparas with fear of childbirth. The data was analyzed by using inductive content analysis.

**Results:** Multiparas' fear of childbirth was relieved by consciously going through emotions, suppressing fear, the knowledge that help was available, the compassionate attention from others, having a optimistic attitude towards giving birth, having all the information available and reinforcing human agency. From professionals' multiparas desired a more favorable atmosphere for giving birth by caesarean, respectful encounters, processing the previous birth thoroughly, capable confidence inspiring care and having the opportunity for additional prenatal calls. In addition, more profound processing of fear, guidance for the upcoming childbirth, getting extensive information about giving birth and being heard in respect of decisions regarding their own birth, were desired.

**Conclusions:** The received support from professionals for multiparas with fear of childbirth does not measure up to the desired support. Support is perceived as insufficient. Multiparas desired more individual support for fear of childbirth according to their own needs before, during and after pregnancy. Then again friends and family and own means to cope with fear appeared to be helpful. Care for fear of childbirth should be improved, unified, and made sure that the care provided is based on the best evidence available. Further education about fear of childbirth should be arranged for prenatal professionals.

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## MIDWIFES ROLE AND PROMOTION OF EARLY INTERVENTION TOWARDS PRENATAL ANXIETY AND DEPRESSION IN THE FAROE ISLANDS; – AN INTERSECTORIAL SHARED CARE-ORGANISATION

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**Background:** Pregnancy often causes anxiety and worries. When severe, undetected and untreated it has a great impact on the mother, child and family's mental health. The mental health and prevalence of anxiety and depression during pregnancy in the Faroe Islands is unknown. Faroe Island has around 700 deliveries a year.

### Aims:

- To examine the mental health and prevalence of anxiety and depression of pregnant women in the Faroe Islands.
- To promote early intervention supporting mental health during pregnancy within the midwifery and within an inter sectorial shared care-organisation.

**Methods:** An intersectorial shared care-organisation was created, and guidelines for the midwives role and promotion of early interventions were defined according to cut-off rates of the Edinburgh Postnatal Depression Scale. At the 10-12 cut-off rate the midwives offered extra consultations, and at the 13 cut-off rate or higher the midwife referred to an interdisciplinary treatment team.

In 14 months 737 folders were handed out and offered an extra midwife consultation focusing on: *How are you? (Hvussu hevur tú tað?)*. Data were collected and statistical calculation carried out using:

- the Edinburgh Postnatal Depression Scale (EPDS - an international well known screening tool for the perinatal period), an extra developed questionnaire including demographics, and a Self-Compassion Scale.

**Results:** 424 (69%) women accepted, and 190 women (31%) declined to participate in the research project. 121 women were excluded for various reasons. Statistical calculation of EPDS screening found that 19% all in all had a need for early intervention. 12% had a cut-off rate of 10-12, and the role and promotion of early intervention by the midwifery was enough to promote and support a state of well-being.

**Conclusions:** Midwives and a shared care-organisation play an essential role in providing early intervention supporting mental health during pregnancy, and in identifying and referring women in need for treatment.

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## EFFECT OF SUPERVISED GROUP EXERCISE ON PSYCHOLOGICAL WELL-BEING AMONG PREGNANT WOMEN WITH OR AT HIGH RISK OF DEPRESSION (THE EWE STUDY): A RANDOMIZED CONTROLLED TRIAL.

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**Background:** Depression is expected to be the leading cause of disability worldwide by 2030. The prevalence is increasing, women being particular at high risk during hormonal transition phases such as pregnancy and the postpartum period.

**Aim:** To assess the effect of supervised group exercise on psychological well-being and symptoms of depression among pregnant women with or at high risk of depression.

**Methods:** This study was undertaken at Department of Obstetrics, Copenhagen University Hospital, Rigshospitalet, Denmark, from August 2016–September 2018. Pregnant women with a current or previous history of depression and/or anxiety requiring treatment within the last ten years, or use of antidepressants three months prior to or during pregnancy, were randomly assigned to 12 weeks supervised group exercise from 17–22 weeks of gestation twice weekly, or to a control group. The primary outcome was self-reported psychological well-being at 29–34 weeks of gestation, measured by the five-item World Health Organization Well-being Index (WHO-5). Secondary outcomes included delivery outcomes and psychological well-being (WHO-5) eight weeks postpartum.

**Results:** The analysis showed no significant effect on psychological well-being on the primary outcome. Mean WHO-5 score in the intervention group was 2.0 (95% CI: -1.3 to 5.2,  $p=0.2$ ) higher than in the control group. Eight weeks postpartum the intervention group reported higher psychological well-being than the control group, mean difference in WHO-5 of 5.5 (95% CI: 1.0 -0.1,  $p=0.04$ ).

**Conclusion:** Supervised group exercise did not improve psychological well-being for women with or at high risk of depression at 29–34 weeks of gestation. Eight weeks postpartum the intervention group reported significant higher psychological well-being than the control group.

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## “FAMILY LIFE STARTS AT HOME” – FATHERS’ EXPERIENCES OF A NEWLY IMPLEMENTED SWEDISH HOME-BASED POSTNATAL CARE MODEL

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**Background:** Fathers who are involved in their infants’ care from the beginning are more likely to be involved throughout their children’s lives. However, fathers can feel insecure and unsupported when participating in hospital-based postnatal care. By offering home-based postnatal midwifery care, the transitions into fatherhood may be strengthened.

**Aim:** To explore and describe fathers’ experiences of a newly implemented Swedish home-based postnatal care model.

**Methods:** Fathers that had participated in a home-based postnatal care model with the mother during the first week after the infant’s birth were included in the study. In total, 16 fathers were semi-structured interviewed over telephone, averaging 43 minutes. Data were analyzed using systematic text condensation.

**Results:** Three major themes emerged: To be at home or at the hospital for postnatal care – a matter of safety, To be offered professional midwifery postnatal support at home, and To be at home helped fathers to navigate parenthood. Fathers appreciated the home-based postnatal care and felt safe because of the received professional support from midwives.

**Conclusions:** Home-based postnatal care was valued by fathers whose partner had a non-complicated vaginal birth because they felt safe in their home environment and supported by the midwives. The home environment aided fathers in supporting their partners and developing a father-infant bond.

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## SEXUAL HEALTH AFTER CHILDBIRTH: PREVALENCE, RISK FACTORS AND NEED FOR CARE

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**Background:** After childbirth, women often experience changes in sexual health. Little is known about the risk factors for developing sexual health problems.

**Aim:** To investigate 1) how many women report changes in sexual health; 2) the prevalence and risk factors of women's postpartum sexual health problems and 3) whether women want to be better informed about sexual health.

**Methods:** From March to May 2021, 641 women were enrolled for a survey, that was put out through social media. At 11.6 months (SD=6.23) after birth, women filled in an online questionnaire, on maternal, pregnancy and childbirth characteristics and childbirth experience (scale 1-10), sexual dysfunction (Female Sexual Function Index), sexual distress (Female Sexual Distress Scale), relationship satisfaction (Relationship Assessment Scale) and "need for care" to discuss sexual health with their health care provider.

**Preliminary results:** Changes in sexual health were found in 88% of women. Sexual dysfunction was found in 43.7% and sexual distress in 52.3% of women. Overall, 46% of women felt more "need for care". Multivariable logistic regression analyses revealed that risk factors for sexual dysfunction were negative sexual experiences (OR 1.56, 95% CI 1.02–2.39), perineal damage (OR 1.54, 1.03–2.30) and age  $\leq$  29 years (OR 1.59, 1.06–2.38). A higher level of relationship satisfaction was a protective factor for sexual dysfunction (OR 0.35, 0.24–0.49). Negative sexual experiences were associated with sexual distress (OR 1.68, 1.16–2.44). A higher score for relationship satisfaction (OR 0.47, 0.3–0.64) and BMI  $>30\text{kg/m}^2$  (OR 0.44, 0.26–0.75) were protective factors for sexual distress. Women scoring higher on childbirth experience less often had sexual distress (OR 0.89, 0.82–0.97) and they had less "need for care" (OR 0.88, 0.81 to 0.96).

**Conclusion:** Sexual health problems are experienced by half of postpartum women. Midwives should inform women more about these problems, taking into account important determinants, including childbirth experience.

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## PARENTAL-COUPLE SEPARATION DURING THE TRANSITION TO PARENTHOOD

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**Background:** Becoming a parent actualizes existential reflections and is an overwhelming life event that poses a challenge to parental-couple relationship. The person who undergo a parental transition tend to be more vulnerable. Issues related to experiences of existential change are not prioritized in maternity care since biomedical issues dominate. Parents are described as unaware and surprised by changes in their relationship and want more information about these changes before they become parents.

**Aim:** To evaluate factors associated with parent couple separation during the transition to parenthood of first-time mothers and partners in relation to pregnancy and the first two years of parenthood.

**Methods:** This is a quantitative longitudinal study of N784 participants throughout the 'pregnancy journey', with multivariate regression analysis of survey data.

**Results:** N17 participants separated at 2 years. Parental separation was significantly greater for those women and partners with low or changing sense of coherence, perceived social support and perceived quality of the parental-couple relationship. Partners with a change in sense of coherence ( $p: .003$ ) and perceived quality of the parental-couple relationship ( $p: .020$ ) between 1 week and 2 years were at greater risk for separation. Attending professional preparatory support together with a partner, for women ( $p: .013$ ) and attending in the "Inspiration Lecture", for partners ( $p: .046$ ) were to a lesser extent, associated with a risk of parental separation.

**Conclusions:** The results indicate the importance of midwives organizing professional preparatory support, as well as enabling partners' participation, the importance of social support and maintaining the quality of relationships. Furthermore, it creates space for reflection and understanding of one's own role in the birth of a child and one's own meaning of becoming a parent. To become a parent is an extremely complex change in life, involving the existential dimension enables an all-encompassing aspect of health.

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BACK



## INTRAPARTUM PUDENDAL NERVE BLOCK ANALGESIA AND CHILDBIRTH EXPERIENCE IN PRIMIPAROUS WOMEN

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**Background:** Negative childbirth experience have both short- and long-term consequences for both mother and child.

**Aim:** To investigate the association between pudendal nerve block (PNB) and childbirth experience.

**Methods:** Primiparous women delivering one live child at term at Oslo University Hospital from 1/1-2017 to 1/6-2019 were eligible for inclusion. Main outcome was total score (range 1.0-4.0, where higher score indicates better childbirth experience) of childbirth experience questionnaire (CEQ), where an absolute risk difference of 0.10 was considered clinically relevant. Propensity score matching was used to adjust for differences in baseline characteristics between women with and without PNB. The analyses were stratified by mode of birth (spontaneous or instrumental vaginal birth).

**Results:** Of 979 women, mean age at delivery was 32 years. Among women with spontaneous vaginal birth, childbirth experience was significantly lower in women with PNB compared to women without PNB, however, the difference was not considered clinically relevant (absolute risk difference -0.09, 95% confidence interval (CI) -0.17 to -0.01, p 0.04). In women with instrumental vaginal birth, childbirth experience did not differ between women with or without PNB (absolute risk difference 0.02, 95% CI -0.10 to 0.14, p 0.74).

**Conclusions:** Women's childbirth experience did not show a clinically relevant difference in women with or without pudendal nerve block.

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## WOMEN'S PERCEPTIONS OF COUNSELLING IN NON-PHARMACOLOGICAL PAIN MANAGEMENT DURING LABOUR: A CROSS-SECTIONAL SURVEY

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**Background:** The counselling of pain management can influence what method of pain management is used during labour. A wide range of both pharmacological and non-pharmacological pain relief methods are currently available for parturients in high-income countries. The counselling of pain management and used counselling methods during labour has received limited research attention.

**Aim:** To describe women's perceptions of counselling in non-pharmacological pain management during labour.

**Methods:** A descriptive, cross-sectional survey was conducted. Sample included women (n=204) who had given birth in one University Hospital in Finland and 250 of parturients were recruited to this study using convenience sampling. The data was collected using a validated questionnaire (P-PAPM) during November 2018–February 2019. The data were analysed statistically.

**Results:** The most counselled non-pharmacological pain relief methods taught by midwives were proper breathing technique, to use cold/heat treatments and to try different positions and movements to alleviate women's pain during labour. In contrast, women were counselled less commonly to listen the music, think pleasant and positive things and to concentrate their thoughts from pain to elsewhere. The most commonly used counselling methods were demonstration and written material. Five different counselling methods were used in counselling of pain management and in two of them included materials from Internet.

**Conclusions:** Women's counselling in non-pharmacological pain management varied much and were inadequately used during labour. Use of videos and different Internet pages for counselling methods should be add in the future. The results revealed that midwives' knowledge and routine use of counselling in pain management should be expanded.

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## WOMEN'S PERCEPTIONS OF NONPHARMACOLOGICAL PAIN RELIEF METHODS AND SATISFACTION WITH THEIR USE DURING LABOUR

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**Background:** Nonpharmacological methods can be used in pain management during labour. In addition, these methods can reduce the use of pharmacological analgesia. The highest barriers not to use nonpharmacological pain relief methods during labour are patients' lack of knowledge to use them or strong beliefs towards the benefits of analgesic. There is a research gap from the viewpoint of women how their pain is relieved when they are giving birth.

**Aim:** To describe women's perceptions of prevalence of used nonpharmacological pain relief methods which require more than the presence of a midwife during their labour, and their satisfaction with the use of nonpharmacological pain relief methods.

**Methods:** A convenience sample of women (n=204) from the maternity ward from one University Hospital in Finland participated in the study during a 4-month data collection period. Women who had given birth were asked to respond to a validated questionnaire (P-PAPM). The data were analysed statistically.

**Results:** Most of the women reported that their pain had been relieved by encouragement (92%), proper breathing technique taught by a midwife (81%), offered heat/cold treatments (75%) and encouraging to move (65%). Instead, only a few of the participants described that their pain during labour were relieved by the aqua blisters (3%), reflexology (e.g zone magnets) (5%) and music (9%). Most of the women (70%) were satisfied with the used of nonpharmacological pain relief methods. However, a few of women were not at all satisfied with the used of pharmacological pain relief methods.

**Conclusions:** All nonpharmacological pain relief methods were not adequately used during labour. Methods than required midwives' own personal contribution were rarely offered to the women. However, further research is needed to determine how effective these methods are at providing pain relief in comparison to commonly used approaches, such as analgesics.

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## THE IMPACT OF GROUP ANTENATAL CARE ON SWEDISH-SOMALI WOMEN'S RATINGS OF CARE AND EMOTIONAL WELLBEING. FINDINGS FROM A HISTORICALLY CONTROLLED EVALUATION

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**Background:** Somali-born women constitute a large group of migrant women of childbearing age in Sweden, with increased risks for perinatal morbidity and mortality and poor experiences of care. Rethinking how care is provided may help to improve outcomes.

**Aim:** To explore if language-supported group antenatal care (gANC) can improve ratings of care and emotional wellbeing for Swedish-Somali women.

**Methods:** In this intervention development and feasibility study of gANC (the Hooyo-project), an historically controlled impact evaluation was conducted. A combination of gANC and individual check-ups, with language support, was implemented during 2017–2019. Participants received 7 x 60-minute group sessions together with other pregnant women and 15–30 minute individual check-ups with their designated midwife. Primary outcomes: women's overall ratings of antenatal care and emotional wellbeing measured with the Edinburgh Postnatal Depression Scale (EPDS) assessed in late pregnancy and 2-months postpartum. Secondary outcomes: other care experiences, social support, knowledge of danger signs, breastfeeding and obstetric outcomes. Participants were pregnant Swedish-Somali women. 145 women were recruited; 81 controls and 64 to the intervention.

**Results:** Forty-eight women participated in at least one gANC session. Preliminary findings indicate no significant differences between the groups on overall ratings of antenatal care or EPDS, but women attending gANC were more likely to report that they had received sufficient information about pregnancy, labor and parenting and had better knowledge of danger signs. Final analyses will be presented at the congress.

**Conclusions:** Immediate impact evaluation of this gANC intervention study suggests some potential for gANC to improve information provision and knowledge acquisition among pregnant Somali-born women. The study demonstrated the feasibility of assessing relevant care and obstetric outcomes with Somali women, but an adequately powered randomized trial is needed if the outcomes of gANC are to be robustly assessed.

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## “NO PAPERS, NO DOCTOR”: A QUALITATIVE STUDY OF ACCESS TO MATERNITY CARE SERVICES FOR UNDOCUMENTED IMMIGRANT WOMEN IN DENMARK

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**Background:** It is estimated that 22.900–28.900 undocumented immigrants reside in Denmark. Due to their legal status, they have restricted access to health care including maternity care. Undocumented immigrants are solely entitled to healthcare for acute, urgent, or pain-relieving needs. Thus, public maternity care during pregnancy and after giving birth is not accessible for undocumented immigrants, and their access to free maternity care services predominantly rely on the informal health system. In relation to the actual birth, the women are entitled to care in a public hospital, but sometimes with a payment claim.

Very little research exists regarding the health and healthcare seeking behavior among undocumented immigrants, especially in a Danish and European setting, therefore the purpose of this study is to explore undocumented immigrant women’s experience of, as well as their access to, maternity care services during pregnancy in Denmark.

**Methods:** Recruiting through the two branches of an NGO-driven Health Clinic in Denmark, we conducted 21 semi-structured interviews with undocumented immigrant women in Denmark from January 2018 to January 2019.

**Results:** The undocumented immigrant women experienced barriers such as fear of deportation, concerns about payment for services, and uncertainties about rules for access. Many of them described depending on NGO-driven initiatives to access maternity care services and found these as providing a safe environment for care.

**Conclusion:** Our findings contribute with insights to understand the health behavior of undocumented immigrant women and highlight the need for inclusive care to safeguard the health of the women and their children.

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## DIFFERENCES IN MATERNAL AND PERINATAL OUTCOMES IN CHILDBIRTH BASED ON CITIZENSHIP: A POPULATION-BASED COHORT STUDY IN ICELAND

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**Background:** The population composition in Iceland has changed considerably during the last decades, which calls for a health system that supports the needs of a more diverse group of childbearing women.

**Aim:** To explore outcomes in childbirth and intrapartum care of migrant women in Iceland and answer the research question "Does maternal and perinatal outcomes and utilisation of intrapartum care differ by citizenship?"

**Methods:** This population-based cohort study included women with singleton birth in Iceland in 1997 and 2018, for a total of 92 403 births. Migrant women were defined as women with citizenship other than Icelandic (N=8158) and categorised into three groups, based on their country of citizenship Human Development Index (HDI) score. The outcome measures were maternal and perinatal outcomes such as onset of labour and mode of birth, and non-pharmacological and pharmacological pain methods. Odds ratios (ORs) and 95% confidence intervals (CIs) for maternal and perinatal outcomes were calculated using logistic regression models.

**Results:** Overall, migrant women had higher adjusted ORs (aORs) for episiotomy, instrumental births, and the use of warm/cold packs as pain relief and no pain relief use, and lower aORs of induction of labor, the use of acupuncture, TENS, shower/bath, aromatherapy, and nitrous oxide compared to Icelandic women.

**Conclusions:** Women's citizenship and country of citizenship HDI scores are associated with a range of maternal and perinatal complications and interventions, and less use of labour non-pharmacological pain relief methods. The results indicate the need for further exploration of whether Icelandic perinatal healthcare services meet the care needs of migrant women, especially those with citizenship from countries with HDI score less than 0.900.

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**050**

## WOMEN'S PERSONAL STRATEGIES ON MANAGING AND INTEGRATING ADVICE ON GESTATIONAL DIABETES INTO THEIR LIVES – A QUALITATIVE STUDY

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**Background:** Preventive measures targeting gestational diabetes may have unintended consequences for counselled women. Studies indicate that women with gestational diabetes experience a loss of personal control and feel controlled by internal and external forces.

**Aim:** The aim of this study is twofold. The first is to gain insight into women's experiences with gestational diabetes and their strategies to cope with advice for changing lifestyle. The second, to use these insights to discuss the approach to the women in preventive strategies targeting gestational diabetes.

**Methods:** Semi-structured interviews with nine women with gestational diabetes were conducted at a university hospital, adopting a phenomenological approach. A thematic content analysis of the transcribed interviews was performed.

**Results:** Three themes were created: Experience of control, personal strategies, and unintended consequences. Women experienced that the monitoring at the outpatient clinic was associated with feelings of surveillance and safety. Women's strategies to integrate recommendations encompassed not consuming unhealthy food items or eating small amounts and then returning to being physically active. Some women experienced feeling different and labelled as a result of the monitoring and their eating habits. Some expressed concern for the baby and the time after birth, thinking about getting diabetes in the future.

**Conclusions:** Even though gestational diabetes is a common diagnosis, it is still essential that every woman is individually treated and supported when integrating advice on gestational diabetes into her life. Standardised advice on managing gestational diabetes should be replaced by approaching women's strategies as a starting point.

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**BACK****051**

## TARGET BEHAVIORS FOR WEIGHT MANAGEMENT INTERVENTIONS FOR OVERWEIGHT PREGNANT WOMEN BY THE BEHAVIOUR CHANGE WHEEL

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**Background:** Maternal overweight is increasing and is associated with several risks for the mother and her infant. Healthy lifestyle behaviors adopted during pregnancy are likely to impact women's health positively after pregnancy.

**Aim:** To identify and describe weight management behaviors in terms of the Capability, Opportunity and Motivation Behaviour (COM-B) -model to target weight management interventions from perspectives of overweight women and maternity care professionals.

**Methods:** The study was conducted between 2019 and 2020. Individual interviews of overweight pregnant or postpartum women (n=11) and focus group interviews of public health nurses (n=5) were undertaken in Southwest Finland. The data were analyzed using deductive content analysis consistent with the COM-B model.

**Results:** The capability category reflected the lack of ability to take a practical approach to lifestyle change. Both, overweight women, and public health nurses thought that there was a need to find consistent ways to approach overweight, as it had often become a feature of the women's identities. Health technology was considered as an element that could be used to approach the subject and support the evaluation of the women's lifestyles in perinatal care. Difficulties of an immediate commitment to long-term change and lack of resources for support during perinatal care were highlighted in the opportunity category. Both groups felt that besides motivation, support from the family was the most important facilitating factor. Women felt helpless in the face of overweight and they expressed a conflict between pregnancy as an excuse to engage in unhealthy habits and pregnancy as a motivational period for a change of lifestyle.

**Conclusions:** In future research, intervention and implementation strategies could target women's capabilities, opportunities, and motivation. Women should be offered clear advice and non-judgmental support to increase awareness of risks associated with unhealthy gestational weight development.

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BACK

052

## USE OF NONSTEROIDAL ANTI-INFLAMMATORY DRUGS DURING PREGNANCY; A DANISH NATIONWIDE DRUG UTILIZATION STUDY

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**Background:** Generally, use of NSAIDs during pregnancy is not recommended, while usage in the third trimester is contraindicated. Nevertheless, NSAIDs are still prescribed to women during pregnancy. Knowledge on prescription patterns as well as determinants of use of NSAIDs during pregnancy are lacking.



**Aim:** We aimed to conduct a drug utilization study on use of prescribed NSAIDs during pregnancy among Danish women.

**Methods:** Through linkage of data from Danish National Health registers, we established a nationwide cohort of all pregnancies ending with a birth 1997–2017. Information on prescribed NSAID was obtained from the National Prescription Register. The prevalence of NSAIDs purchased during pregnancy including type, number of prescriptions, and time of use were assessed during pregnancy; and specifically, in the third trimester. Main determinants of use were assessed using logistic regression models.

**Results:** 1,311,373 pregnancies by 748,239 women were included. Of these, 25,253 women (3.4%) redeemed at least one prescription of any NSAID in 26,389 pregnancies (2.0%). NSAIDs were primarily purchased in the first trimester (59.9%). The median number of redeemed prescriptions was 1. Ibuprofen was the most common used type (66.7%). Maternal determinants of use during pregnancy were low education, high BMI, multiparity, smoking, and maternal diseases. During the third trimester NSAID was purchased in 12.8% (n=3344) of the exposed pregnancies and 33% (n=1101) of these were registered with a diagnosis of either migraine, other headaches, or musculoskeletal disorders.

**Conclusion:** NSAID was purchased in all age groups and in all trimesters, indicating a general need of NSAID utilization in pregnancy and not limited to women with chronic diseases. However, one third of the users in third trimester had a diagnosis of chronic disease. Clinicians should be aware of the observed determinants.

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## MODELS FOR MIDWIFERY CARE – A MAPPING REVIEW

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**Introduction:** Women have the right to get a normal physiological childbirth and midwives are found competent to provide evidence-based normalcy-facilitating maternity care. An overview of existing scientifically developed theoretical models for midwifery care had to our knowledge not been published.

**Aim:** To identify and gain an overview of publications of theoretical models for midwifery care.

**Methods:** A mapping review with systematic searches in nine databases was conducted. We searched for studies describing a theoretical model or theory for midwifery care that either did or was intended to impact clinical practice. Eligibility criteria were refined during the selection process.

**Results:** Six models from six papers originating from different parts of the world were included in the study. The included models were developed using different methodologies and had different philosophical underpinnings. An emphasis of the midwife–woman relationship was the most distinctive common characteristic between the models, followed by a focus on woman-centeredness, and a salutogenic focus on care.

**Conclusion:** Overall, theoretical models for midwifery care with explicit epistemological statuses are lacking. Further research is needed to develop generic theoretical models with an epistemological status to serve as a knowledge base for midwifery healthcare.

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## WOMEN'S EXPERIENCES OF CASELOAD IN RURAL SWEDEN – A LONGING FOR A SENSE OF SECURITY

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**Background:** The World Health Organization recommends continuity of midwifery care such as caseload. Caseload midwifery care is established in many countries but not yet in Sweden. After the closure of the local maternity unit in a rural area of middle Sweden, a project that offered caseload midwifery was set up.

**Aim:** To describe women's experiences of continuity of midwifery care during pregnancy, labour and birth, and the first days of their baby's life in a rural area of Sweden.

**Methods:** A qualitative descriptive study using thematic analysis with a semantic approach. Thirty-three women were interviewed over telephone following a semi structured interview guide.

**Results:** The overarching theme "A longing for a sense of security" included three themes. "The value of having access to a midwife" described how women emotionally and practically experienced the contact with the midwives, and their availability. "The importance of professional midwifery care" described how women experienced the trustful relationship to a skilled midwife, but also the gratefulness of giving birth with a midwife by her side, regardless of relationship. "Expectations, gratitude and disappointments about the continuity of care" summarized how women felt when events somehow did not turn out as expected.

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**Conclusion:** Women's sense of security was strengthened by receiving continuity of midwifery care during pregnancy, birth and the first days of their baby's life. To be cared for by a known midwife was especially appreciated during labour and birth, which contributes to the evidence of the positive effects of continuity of midwifery care. The impact of prerequisites and the pregnant women's expectations should be addressed when planning further continuity interventions in Sweden, in order to be able to provide care adapted to the needs of women.

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## A CASELOAD MIDWIFERY MODEL AT KAROLINSKA UNIVERSITY HOSPITAL HUDDINGE. MEDICAL SAFETY FOR THE MOTHER AND INFANT AFTER TWO YEARS OF PRACTICE.

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**Background:** Health care organisation during pregnancy, labor and birth and postnatal in Sweden origins back from the 1950ies. Midwives usually works either with antenatal care in the community or at labor and postnatal wards in hospitals. Karolinska University Hospital has implemented the first full case load midwifery (CLM) model in Sweden where midwives care for the woman from early pregnancy thru labor and birth to the end of the early postnatal period. CLM models has been tested in a number of RCT in other countries with improved maternal and neonatal outcomes. There is no knowledge whether this model of care can improve maternal and neonatal outcomes in Sweden.

**Aim:** To evaluate maternal and neonatal medical safety in a case load midwifery continuity of care model at Huddinge University Hospital Stockholm.

**Methods:** A matched cohort study using propensity score matching. Data on all births occurring at Huddinge hospital during 2019–2020 was retrieved from the Pregnancy Quality register. Women cared for in the CLM model was considered exposed. By using propensity scores we identified a control group (1:3) among women cared for in standard care. Risk ratios was used to identify possible differences in outcomes between the two groups.

**Results:** Women cared for in the CLM model less often delivered preterm RR 0.43 (CI 0.25–0.73) and less often gave birth to infants born LGA RR 0.48 (CI 0.25–0.90). Women cared for in the CLM model more often had a spontaneous vaginal birth RR 1.08 (CI 1.03–1.14) and less often were delivered by cesarean section. Women cared for in the CLM model had significant shorter total and postnatal stay at the hospital. There were no adverse maternal or neonatal outcomes associated with the CLM model of care.

**Conclusions:** To be cared for in a midwifery continuity of care model during pregnancy, labor and birth and postnatal is as safe as being cared for in standard care. There are reasons to believe that being cared for in a midwifery continuity of care model can improve outcomes for mothers and babies in Sweden.

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## THE COMMUNITY-BASED BILINGUAL DOULA – A NEW ACTOR FILLING GAPS IN LABOUR CARE FOR MIGRANT WOMEN. FINDINGS FROM A QUALITATIVE STUDY OF MIDWIVES’ AND OBSTETRICIANS’ EXPERIENCES

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**Background:** In making a decision about whether to introduce community-based bilingual doulas (CBDs) or not for migrant women in labour, and to develop agreed parameters for the CBD role, it is important to understand how they are received in the labour ward, how they act in the care of migrant women in labour and how they collaborate with clinical caregivers.

**Aim:** To explore midwives’ and obstetricians’ views about community-based bilingual doula (CBD) support during migrant women’s labour and birth and their experiences of collaborating with CBDs.

**Methods:** A qualitative study with semi-structured individual interviews with 7 midwives and 4 obstetricians holding clinical positions in labour care in Stockholm, Sweden, who all had experiences of working with a CBD. Data analysis followed the framework of thematic analysis.

**Results:** The overarching theme was *A new actor filling gaps in labour care – With appropriate boundary setting, CBDs can help improve care for migrant women*. One year after the introduction of CBDs, the midwives and obstetricians had mainly positive experiences of CBDs who were considered to fill important gaps in maternity care for migrant women, being with the woman and simultaneously being part of the care team and this made providing high quality care easier. The CBDs’ main contribution was to help migrant women navigate the maternity care system, to bridge language and cultural divides, and guarantee continuous labour and birth support. However, midwives and obstetricians sometimes experienced CBDs interfering with their professional assessments and decisions and the role of the CBD was somewhat unclear to them.

**Conclusions:** Community-based bilingual doula support was viewed as improving migrant women’s well-being during labour and birth and as increasing the possibilities for midwives and obstetricians to provide good and safe care, however, some ambivalence remained about the CBD’s role and boundaries.

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## COMMUNITY-BASED BILINGUAL DOULA SUPPORT DURING LABOUR AND BIRTH TO IMPROVE MIGRANT WOMEN'S INTRAPARTUM CARE EXPERIENCE AND EMOTIONAL WELL-BEING – FINDINGS FROM A RANDOMISED CONTROLLED TRIAL IN STOCKHOLM, SWEDEN

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**Background:** The increasing proportion of births to migrant women in Sweden and in other high-income countries requires attention to adapt care for the needs of a diverse population. Barriers to equitable and high-quality care for migrant women are communication difficulties, lack of familiarity with how care is provided, and prejudicial staff attitudes and discrimination. Migrant women also report being left alone, feeling fearful, unsafe and unsupported. Previous studies support the potential for Community-Based Doulas (CBDs) to enhance migrant women's experiences of birth and of care, their pregnancy outcomes and postpartum well-being, yet, no randomised controlled trials evaluating the effectiveness of CBD support have been implemented.

**Aim:** To evaluate the effectiveness of community-based bilingual doula (CBD) support for improving the intrapartum care experiences and postnatal wellbeing of migrant women giving birth in Sweden.

**Methods:** Randomised controlled trial including 164 pregnant Somali-, Arabic-, Polish-, Russian- and Tigrinya-speaking women who could not communicate fluently in Swedish and had no contra-indications for vaginal birth. Women were randomised to CBD support (n=88) or no such support during labour (n=76). Trained CBDs met with women prior to labour, provided support by telephone after labour had started, then provided emotional, physical and communication support to women throughout labour and birth in hospital, and then met again with women after the birth. Primary outcomes were women's overall ratings of the intrapartum care experiences (Migrant Friendly Maternity Care Questionnaire) and postnatal wellbeing (Edinburgh Postnatal Depression Scale) at 6-8 weeks after birth.

**Results:** In total, 150 women remained to follow-up; 82 women (93.2%) randomised to receive CBD support and 68 women (89.5%) randomised to SC. Preliminary analyses showed that there were no differences between the groups regarding women's intrapartum care experiences or emotional wellbeing. Final results will be presented at the congress.

**Conclusions:** Will be presented at the congress.

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## COMMUNITY-BASED BILINGUAL DOULAS FOR MIGRANT WOMEN IN LABOUR AND BIRTH: FINDINGS FROM A SWEDISH REGISTER-BASED COHORT STUDY

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**Background:** Community-based bilingual doula (CBD) services have been established to respond to migrant women's needs and reduce barriers to high quality maternity care.

**Aim:** To compare birth outcomes for migrant women who received CBD support in labour with birth outcomes for (1) migrant women who experienced usual care without CBD support, and (2) Swedish-born women giving birth during the same time period and at the same hospitals.

**Methods:** Register study based on data retrieved from a local CBD register in Gothenburg, the Swedish Medical Birth Register and Statistics Sweden. Birth outcomes for migrant women with CBD support were compared with those of migrant women without CBD support and with Swedish-born women. Associations were investigated using multivariable logistic regression, reported as odds ratios (aORs) with 95% confidence intervals (CI), adjusted for birth year, maternal age, marital status, hypertension, diabetes, BMI, disposable income and education.

**Results:** Migrant women with CBD support (n=880) were more likely to have risk factors for adverse pregnancy outcomes than migrant women not receiving CBD support (n=16,789) and the Swedish-born women (n=129, 706). In migrant women, CBD support was associated with less use of pain relief in nulliparous women and in parous women with increased odds of induction of labour and longer hospital stay after birth. CBD support was not associated with non-instrumental births, perineal injury or low Apgar score. Compared with Swedish-born women, migrant women with CBD used less pain relief and nulliparous women with CBD support had increased odds of emergency caesarean section and longer hospital stay after birth.

**Conclusions:** CBD support appears to have potential to reduce analgesia use in migrant women with vulnerability to adverse outcomes. Further studies of effects of CBD support on mode of birth and other obstetric outcomes and women's experiences and well-being are needed.

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## WHAT WOMEN EMPHASISE AS IMPORTANT ASPECTS OF CARE IN CHILDBIRTH – AN ONLINE SURVEY

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**Background:** Childbirth is an important existential life-event. Paying attention to service users' views is a crucial part of planning maternity care, to provide services that women want and need.

**Aim:** To explore and describe what women who have given birth in Norway emphasise as important aspects of care during childbirth.

**Methods:** The study is based on data from the Babies Born Better (B3) online survey, version 2. Descriptive statistics were used to describe sample characteristics and to compare data from the B3 survey with national data from the Medical Birth Registry of Norway. The open-ended questions were analysed with an inductive thematic analysis. Themes developed from two open-ended questions.

**Results:** The final sample included 8,401 women. There were no obvious differences between the sample population and the national population with respect to maternal age, marital status, parity, mode of birth and place of birth, except for the proportion of planned homebirths. Four themes and one overarching theme were identified; Compassionate and Respectful Care, A Family Focus, Sense of Continuity and Consistency, and Sense of Security and the overarching theme: Coherence in Childbearing.

**Conclusions:** Norwegian women across all birth settings emphasise maternity care that authentically focuses on both socio-cultural and psychological aspects of care, and physical and clinical factors. If the positive aspects of care identified in this study are adopted at all levels of the maternity care system and from all care providers, there is a high chance that most women will have a safe outcome, and a strong sense of coherence related to a positive birth and motherhood experience.

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## EVALUATING THE USEFULNESS OF A MIDWIFERY MODEL OF WOMAN-CENTRED CARE (MIMO) IN PRACTICE AT A LABOUR WARD IN SWEDEN

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**Background:** Theoretical models for midwifery have been developed in different contexts but few are evaluated in practice. Based on own research in Sweden and Iceland a midwifery model of woman-centred care (MiMo) has been developed.

**Objectives:** Evaluating the usefulness of MiMo at labour wards.

**Methods:** A mixed methods study. MiMo was implemented during one year 2015-2016 at a university hospital in the western part of Sweden; one labour ward was used for the implementation and one was situated in another part of the city as a reference ward. Data was gathered before and after the implementation. The intervention comprised a one-day (8 hours) education about the model together with regularly scheduled reflection groups for midwives. Focus group interviews were held with 16 midwives, 8 obstetricians, 11 assistant nurses and 8 managers. An ethnographic field study with six midwives was conducted before the implementation. A survey with 58 midwives measuring burnout, stress, demand and control, organization climate and SOC with validated scales was also performed.

**Results:** MiMo was assessed as useful by midwives, managers, and obstetricians as it gives words to midwifery care, but there is a need to clarify professional roles and interdisciplinary collaborations, in a “baby factory context”, where midwives’ care was perceived as “veiled” by other professions. Further, the midwives work in a field of tension and have to balance contrasting models of care, which indicates the need for a model but can also hinder the implementation of a model. MiMo has the potential to strengthen the professional role and midwifery practice but not the strained work situation for midwives. There were no significant differences in the measures of work situation.

**Conclusion:** MiMo has a potential as it “gives words” to midwifery, strengthening midwives professional role, and midwifery practice but a strained work situation is a hindering factor.

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## AUTONOMY DURING CHILDBIRTH: A PHENOMENOLOGICAL HERMENEUTICAL ANALYSIS OF PERSONAL AUTONOMY EXPERIENCED BY WOMEN GIVING BIRTH

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**Background:** The Danish Health Law provides the possibility to secure integrity and self-determination for each and every individual. How does that correspond to what women experience during childbirth today?

**Aim:** The purpose of this paper is to improve our understanding of the mother's autonomy during childbirth in order to have a foundation for developing methods to improve the support of the mother's autonomy.

**Method:** The scholarly treatment of the subject is qualitative phenomenological hermeneutical, and the presented data were derived from semi-structured interviews with 12 Danish women who have given birth within the last six months of the interview. The method of Paul Ricoeur's (1913–2005) structural analysis is used for systematic text condensation and Michel Foucault's (1926–1984) thoughts on power are used as a theoretical basis.

**Results:** The women have different perceptions and different desires for maintaining personal autonomy during childbirth. The women are generally divided into three groups; women who enforce their personal autonomy, women who do not weight personal autonomy, and women who waive autonomy if it made sense to them. A theoretical model appears – an autonomy flower, which may help to visualize various aspects of personal autonomy during childbirth.

**Conclusion:** Personal autonomy is of great importance for women giving birth. However, some women are willing to let go of their own integrity and self-determination if they feel safe with the midwife and the surroundings. The recommendation to practice is for midwives to become more conscious of which elements of the personal autonomy – which petals of the autonomy flower – they are dealing with during a childbirth.

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## EFFECTS OF A MIDWIFE-COORDINATED MATERNITY CARE INTERVENTION (CHROPREG) VS. STANDARD CARE: RESULTS FROM A RANDOMIZED CONTROLLED TRIAL

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**Background:** The proportion of childbearing women with pre-existing chronic medical conditions (CMC) is rising and is estimated to affect 16-29% of all pregnancies. Women with CMC are at higher risk of pregnancy complications such as miscarriage, preterm birth, pre-eclampsia, operative delivery, and congenital malformations. Further, women with CMC are at higher risk of developing perinatal mental illness.

**Aim:** We aimed to evaluate the effects of a midwife-coordinated maternity care intervention (ChroPreg) in pregnant women with CMC.

**Methods:** We conducted a parallel randomized controlled trial with 1:1 allocation to either the ChroPreg intervention or Standard Care. The intervention consisted of three main maternity care components: 1) Midwife-coordinated and individualized care, 2) Additional ante- and postpartum consultations, and 3) Specialized known midwives. The primary outcome was the total length of hospital stay (LOS). Secondary outcomes were patient-reported outcomes measuring psychological well-being and satisfaction with maternity care, health utilization, and maternal and infant outcomes.

**Results:** A total of 362 women were randomized to the ChroPreg intervention (n=131) or Standard Care (n=131). No differences in LOS were found between groups (median 3.0 days, ChroPreg group 0.1% lower LOS, 95% CI -7.8 to 7%, p=0.97). Women in the ChroPreg group reported being more satisfied with maternity care measured by the Pregnancy and Childbirth Questionnaire (PCQ) compared with the Standard Care group (mean PCQ 104.5 vs. 98.2, mean difference 6.3, 95% CI 3.0–10.0, p<0.0001).

**Conclusions:** The ChroPreg intervention did not reduce LOS. However, women in the ChroPreg group were significantly more satisfied with the maternity care they received.

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## CONTEXTUAL FACTORS INFLUENCING THE MAMA ACT INTERVENTION ACROSS DENMARK – A QUALITATIVE STUDY OF NON-WESTERN IMMIGRANT WOMEN’S RESPONSE TO PREGNANCY COMPLICATIONS IN EVERYDAY LIFE

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**Background:** Some groups of immigrant women in Western countries have an increased risk of negative pregnancy and birth outcomes compared to the host populations. Delayed reactions to pregnancy complications contribute to ethnic inequities in reproductive health. The MAMA ACT intervention intended to improve women’s and the maternity care system’s response to pregnancy complications. For midwives, the intervention comprised intercultural communication and cultural competence training as well as dialogue meetings. For women, it included a leaflet and a mobile application describing the most common pregnancy complications and how to respond to them.

**Aim:** To investigate how the intended intervention mechanisms regarding response to pregnancy complications were affected by barriers in non-Western immigrant women’s everyday life situations.

**Methods:** Twenty-one in-depth interviews with non-Western immigrant women were undertaken. Data were analysed in two steps: (1) systematic text condensation and (2) application of the situational-adaptation framework.

**Results:** Four main categories were identified. ‘Sources of knowledge during pregnancy’, which described how women were more prone to use the internet for informational support than family and friends. ‘Containment of pregnancy warning signs’ illuminating how domestic, work and school obligations lead to the containment of potential pregnancy complication symptoms. ‘Barriers during the onset of acute illness’ showing how low language proficiency, lack of transport and practical support prevented women from seeking timely care, and finally ‘Previous situations with maternity care providers’ illustrating how negative experiences with maternity care providers affected women’s motivation to seek care and led some women to engage in self-care instead.

**Conclusions:** Attention to potential pregnancy complications may conflict with immigrant women’s everyday life. This may result in the containment of symptoms and cause delays in seeking care. It is possible, that barriers in women’s everyday life will impact the intended intervention mechanisms, and the full potential of the intervention may not be reached.

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## REVIEWING BIRTH EXPERIENCE WITH A KNOWN MIDWIFE FOLLOWING A HIGH-RISK PREGNANCY: A PROCESS EVALUATION

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**Background:** Complications during pregnancy and birth are known risk factors for negative birth experience. Limited knowledge exists about appropriate interventions and the feasibility of providing such care for women following high-risk pregnancies.

**Objectives:** The aim of the study is to describe the construction of and evaluate a five-phase process of implementing a postpartum midwife-led counselling intervention for women following high-risk pregnancies.

**Methods:** The study is a mixed-method pilot study conducted at a high-risk antenatal outpatient clinic. Thirty women who experienced high-risk pregnancies were invited to write about and review their birth experience with a known midwife 4–6 weeks postpartum. Eight midwives working in a high-risk antenatal clinic, provided the intervention after a special training involving educational material about communication skills, counselling strategy and evidence about birth experience. Data including birth outcomes, appraisal of birth and experience of the intervention, were collected by questionnaires from women at two time points before and after the counselling intervention. Midwives providing the intervention completed diaries and participated in focus group interview to explore their experiences of the process. Descriptive and content analysis was used for analysis.

**Findings:** The findings indicate that the midwife-led counselling intervention is a feasible choice for women following high-risk pregnancies. Midwives evaluated the pre-training program as helpful. Most women would like to review their birth experience with a midwife they know, 4–6 weeks postpartum. Almost half of the women wrote about their birth experiences and those who did perceived it as helpful.

**Conclusion:** This process evaluation revealed that a counselling intervention to review birth experience is a feasible choice in maternity care following high-risk pregnancies and that the women might benefit from such a follow up by a midwife they know. A large-scale study is suggested for further exploration of the effects of such a preventive midwife-led counselling intervention.

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## AN ETHNOGRAPHY OF THE INFLUENCE AND MEANING OF THE HOSPITAL BIRTHING ROOM FOR LABOURING NULLIPAROUS WOMEN

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**Background:** Since giving birth is a profound life experience, it is important to understand the impact of the physical and psychosocial environment on women's birth processes. As part of the Room4Birth research project, a birthing room at a labour ward in Sweden was redesigned to increase its potential to be adapted to personal needs, reduce stress, enable for the endogenous oxytocin release and thereby facilitate a healthy labour and birth process.

**Aim:** To explore the influence and meaning of the birthing room for nulliparous women.

**Methods:** Ethnographic fieldwork was conducted, including five months of participant observations of nulliparous women (n=16) labouring in either a regular birthing room (n=8) or the redesigned birthing room (n=8). Reflective memos and informal interviews with women, companions and care providers were transcribed and in-depth interviews with eight of the women were conducted two to seven months after birth. An ethnographic iterative process was used to analyse the data.

**Results:** We identified the birthing room as consisting of the physical space, the human interaction and cultural practices within it. The Birth Manual was an identified analytic concept for managing birth according to the organisational authority that was incorporated into the birthplace. The conforming of this manual affected the atmosphere, birth practices and role disposition in the room. The results describe how authoritative guidance of birth processes can disposition women as passive participants, but also how midwives can enable for a birth environment where women experience safety and a sense of agency.

**Conclusions:** Regardless of the design of the room, a power imbalance between birthing women's needs and organisational demands was identified. This emphasises the need to modify the physical design of birth units, but more importantly, to incorporate a care philosophy that promotes childbirth physiology and agency of birthing women.

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**066**

## MANAGEMENT OF THE ACTIVE SECOND STAGE OF LABOR IN WATERBIRTHS COMPARED WITH CONVENTIONAL BIRTHS

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**Background:** The management of the active second stage in labor and perineal protection varies between countries and is rarely described regarding waterbirths.

**Aim:** To describe how midwives manage the active second stage of labor in waterbirths compared to conventional births. A secondary aim was to compare clinical outcomes between the two groups.

**Methods:** A prospective cohort study, based on 323 women who gave birth at three clinics in Sweden, between Dec 2015–May 2019. The women were both primiparous and multiparous; 153 gave birth in water and 170 had a conventional uncomplicated birth. A protocol was completed by the attending midwife after birth, describing characteristics and management of the active second stage of labor as well as perineal protection.

**Results:** The active second stage of labor differed in several aspects between waterbirths and conventional births. Further results will be presented at the conference.

**Conclusions:** This study has clinical relevance for discussions of best practice and various techniques when assisting waterbirth.

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**067**

## BUSY DAY EFFECT ON INTRAPARTUM ADVERSE MATERNAL OUTCOMES – A POPULATION BASED STUDY OF 601 247 SINGLETON DELIVERIES

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**Background:** The birth is an individual and unpredictable process. Inconsistent daily patient flow can cause busy days compared to delivery unit's optimal capacity.

**Aim:** To analyse the busy day effect on selected adverse delivery-related maternal outcomes (blood transfusion, manual removal of placenta and obstetric anal sphincter injuries (OASIS)) separately in different sized delivery units.

**Methods:** Retrospective register study of singleton hospital deliveries (N=601 247) from 26 delivery units, between 2006 to 2016, with the data of Finnish Medical Birth Register. Daily delivery frequencies and ranges (min-max) were calculated for each delivery unit and these distributions were stratified by hospitals' annual delivery volume (category (C)1 <1000, C2 1000–1999, C3 2000–2999, C4 ≥3000) and the profile of university hospital (C5). Busy and quiet days were calculated by the number of days (%) with the lowest and highest daily delivery frequency and summed to the nearest 10%, optimal days were defined as reference group representing around 80% of deliveries occurring between the lowest (10%) and highest (10%) in each hospital category. Crude and adjusted odd ratios (ORs) with 99% confidence intervals (CIs) were used to analyse the busy day effect on selected adverse maternal outcomes.

**Results:** Busy day effect was noticed in middle-sized (C2) and university hospitals (C5), where blood transfusions increased 28% (99% CI 8–52%) and 25% (99% CI 11–40%), respectively. Quiet days were associated with 22% (99% CI 10–31%) less blood transfusions in university hospitals (C5). In larger hospitals (C3) 83% (99% CI 65–92%) less blood transfusions were needed during busy days. OASIS rate declined 22% (99% CI 3–38%) during quiet days in university hospitals (C5).

**Conclusions:** Busy day effect is associated to increased or decreased need for delivery-related blood transfusions, quiet days with decreased number of OASIS. To prevent the blood transfusions, quiet days may be beneficial for personnel's training.

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## SUPPORT DURING THE POSTNATAL PERIOD – EVALUATION OF MOTHERS AND MIDWIVES' EXPERIENCES OF A NEW COORDINATED POSTNATAL CARE-MODEL IN A MIDWIFERY CLINIC

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**Background:** Continuity of care through midwives to promote health and wellbeing for new mothers during the postnatal period is critical and thus, access to midwifery services needs to be facilitated.

**Aim:** The aim of this study was to describe women's and midwives experiences and perceptions of a new coordinated postnatal care-model intervention in a midwifery clinic.

**Methods:** A qualitative methodology with a deductive content analysis that related to different concepts of continuity of care was used. New mothers provided responses on open-ended questions in a survey and midwives participated in interviews to evaluate the intervention. As an intervention, coordinated postnatal care-model was used and all registered pregnant women at a midwifery clinic in Stockholm, Sweden, received increased postnatal support. There was a

focus on continuity of care from pregnancy to the postnatal period which included planning at the end of pregnancy and an early contact and several postnatal visits within the midwifery clinic.

**Results:** When new mothers describe the coordinated postnatal care-model they highlighted different aspects of continuity and accessibility as factors that empowered them and made them safe and secure. Also the midwives emphasized the continuity from pregnancy to the postnatal period as important for the possibility to give care based on individual needs.

**Conclusions:** There is an overall need for more focus on how the transition to parenthood and women's wellbeing and health after childbirth could be improved by midwifery care. A structured and coordinated care-model including planning for the postnatal period during the end of pregnancy can be a good way to create continuity of care and thus security for expectant and new mothers. The women-midwife relationship is important in several perspectives based on the concept of continuity of care.

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## 'THEY WERE MORE OF A HINDRANCE THAN A HELP': HOW CAN HEALTHCARE WORKERS PROVIDE BETTER SUPPORT FOR WOMEN IN THE POSTNATAL PERIOD?

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**Background:** Becoming a new parent can be stressful as well as joyful. Positive support for parenting and breastfeeding from health and care staff has a crucial impact on women's capacity to cope in the early weeks, but women sometimes report they do not get the support that they need. Using data from Finland and the UK, we examine women's postnatal support needs in relation to parenting and breastfeeding and describe training to develop psychosocial skills for staff to meet these needs using motivational and behaviour change techniques.

**Aim:** To understand the parenting and breastfeeding support needs of new mothers in the postnatal period in Finland and the UK, and present an outline framework for delivering knowledge and support skills and techniques required by healthcare staff.

**Methods:** Comparative qualitative and quantitative data from an online cross-sectional survey of 2236 mothers of children under 2 years in Finland and UK is used to demonstrate women's support needs. Information from the Scottish MAP training programme in support skills in healthcare workers will provide a suggested training template.

**Results:** Professional support using the CARE measure was rated lower by women in Finland. Better support from healthcare workers in Finland and the UK was related to lower parenting stress ( $p < .001$ ) and breastfeeding stress ( $p < .001$ ). Qualitative data emphasised the need for clear and consistent information and empathic care and support. Positive evaluation of the 'MAP Healthy Beginnings' training programme showed staff can increase empathic communication skills ( $p < .001$ ) and behavioural techniques ( $p < .001$ ).

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**Conclusions:** The postnatal period provides a key opportunity for healthcare staff to develop supportive relationships to help parents cope with the demands of a new baby and establish breastfeeding. It is feasible and effective to train healthcare staff in specific psychosocial techniques, to develop their own skills and confidence in optimal ways of supporting parents.

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## MOTHERS' SELF-EFFICACY AND PARENTING SATISFACTION DURING THE POSTPARTUM PERIOD – EVALUATION OF AN INFANT CALMING INTERVENTION

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**Background:** Having an excessively crying infant in the family causes many problems. Excessive crying has not been completely explained despite many theories. Numerous interventions have been researched with a variety of methods often failing to provide concrete help.

**Aim:** To evaluate the effectiveness of The Happiest Baby intervention on mothers' self-efficacy and parenting satisfaction during the postpartum period and to produce evidence of the feasibility of the intervention in calming and reducing excessive crying in infants.

**Methods:** The data for this randomized controlled study were collected from three postpartum units in one university level hospital in Finland. 250 mothers participated, of which 120 were randomly allocated to the intervention and 130 to the control group. All mothers completed a baseline questionnaire. Mothers in the intervention group were taught The Happiest Baby infant calming technique in the hospital. The control group mothers received standard care. Follow-up data were collected six to eight weeks postpartum. The primary outcome measure was to compare the change in parenting self-efficacy and parenting satisfaction over the follow-up period between the intervention and control groups.

**Results:** Parenting self-efficacy showed significant differences in median improvements between the groups. The intervention group showed significantly larger improvements in their scores. There were no statistically significant differences in median improvements in parenting satisfaction between groups. Almost all mothers, who used The Happiest Baby technique, experienced it feasible; all infants calmed completely or somewhat, and all mothers recommended the method to other families.

**Conclusions:** The Happiest Baby infant calming intervention can strengthen mothers' parenting self-efficacy. The mothers experienced the intervention feasible. These findings are valuable when equipping mothers with evidence-based infant calming interventions. Results of this study may help to develop midwife care to support mothers and families, regardless if their infants are fussy or not.

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## **MEDICALISATION IN PREGNANCY AND CHILDBIRTH – What it is, and how it influences contemporary maternity care? (Part 1)**

*Eva Rydahl, Midwife, MHS, Ph.D., Lecturer; University College Copenhagen*

**Background:** Current evidence indicates that pregnancies increasingly are managed, monitored, interfered with, and often terminated by interventions. Regulating the physiological process of labour is usually done to improve maternal and fetal health, and especially perinatal health has improved considerably over the last decades. However, today women with straightforward pregnancies may be subject to interventions such as induction of labour, administration of synthetically manufactured oxytocin, electronic fetal monitoring, epidural analgesia, episiotomies, and cesarean section. Interventions in pregnancy and childbirth may come with a price and most interventions, besides beneficial effects, also have iatrogenic consequences beyond the intended purpose. The trend of increased intervention rates is a global phenomenon. The term ‘too much, too soon’ has recently been used in high- and middle-income countries to describe situations with routine overmedicalization of pregnancy and childbirth.

**Aim:** The presentation aims is to give an overall and short introduction to “Medicalisation” as a concept, how medicalisation influences women’s life, and how pregnancy and childbirth are subjected to medicalisation processes.

**Learning outcome:** Delegates will be (1) provided with a short introduction to the concept of “Medicalization”, and (2) will be presented to signs of medicalisation in contemporary female life and maternity care and (3) finally be introduced to the mechanisms fueling the medicalisation process of labour.

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## **MEDICALISATION IN PREGNANCY AND CHILDBIRTH – do we have a problem? (Part 2)**

*Eva Rydahl, Midwife, MHS, Ph.D., Lecturer; University College Copenhagen*

**Background:** With a general increase in the medicalisation of pregnancy and childbirth, the risk of overmedicalisation also becomes increasingly relevant to discuss and monitor. During the last decades, normal physiological processes of childbirth have increasingly been subjected to monitoring and interference. Women’s age when laboring, gestational age at birth, the pace of labor, labor pain, and even the perineum has become subject to medical concepts of treatment. These interventions may come with a price as most interventions, besides beneficial effects, also have iatrogenic consequences beyond the intended purpose. The vast differences in intervention rates between otherwise comparable populations suggest culture as an important driver of medicalisation.

**Aim:** The aim of the presentation is to explore the possible consequences of medicalisation in contemporary maternity care.

**Learning outcome:** Delegates will be presented to newer research studies relevant in a Nordic context that provide (1) examples underpinning the cultural aspect of interventions, (2)

examples of interventions, that reflect a medical approach to otherwise normal processes of labor, and (3) examples of the possible adverse short- and long-term consequences of laboring in a medicalised setting.

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## POTENTIAL FOR IMPROVEMENT IN NORWEGIAN LABOUR CARE

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**Background:** In spite of solid research to do otherwise, maternity care in high income countries, and some other countries throughout the world, seems to continue the medicalisation of care. This presentation is an analysis and discussion of some aspects of medicalisation in Norwegian labour care.

**Aim:** To analyse the Norwegian labour care system in the light of medicalisation related to woman centred care and salutogenesis.

**Methods:** A scientific essay, mainly based on 97 international research papers as well as national sources: research, statistics from the Medical birth register and governmental documents. The presentation looks into Norwegian labour care focusing on: caesarean section, augmentation of labour and place of birth related to women-centred care and salutogenesis.

**Results:** The results presents in two main themes: medicalised labour care in a cultural perspective and; good labour care (in particular for physical outcomes). However, the results indicates that there is potential for improvement; there is incongruence between the Norwegian health authorities' goals and visions of reducing medicalised care and the reality. Even if Norway in an international perspective have low Caesarean section rates, they have risen over time. Interventions during childbirth has also risen, e.g., 50% of Norwegian first time mothers are given intravenous labour augmentation. The national policy to maintain decentralized labour care services is not followed. Instead, the labour care has been centralized and smaller midwifery led units closed down. Woman centered care focusing on women's experiences, shared decision making and relational aspects between woman and caregiver can counteract the escalating process of medicalisation. Furthermore, including salutogenesis into the care may strengthen the health promoting perspectives and contribute to reduce medicalization.

**Conclusions:** Women centered care and salutogenesis are models of care that can reduce medicalisation and thereby improve and adapt Norwegian labour care to its goals and visions.

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## THE OVERUSE OF INTRAPARTUM CARDIOTOCOGRAPHY (CTG) FOR LOW-RISK WOMEN – AN ACTOR-NETWORK THEORY ANALYSIS

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*Helen Cooke, RM, PhD, Maternity Services Consulting, Australia*

*Stine W. Adrian, Assoc. Prof., PhD, Department of Culture and Learning, Aalborg University, Denmark*

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**Background:** There is an overuse of cardiotocography (CTG) for intrapartum fetal monitoring for low-risk women in high income countries, despite recommendations in evidence-based guidelines.

**Aim:** To apply Actor-network theory as a theoretical perspective to unfold the paradox of why midwives use CTG for low-risk women despite evidence-based recommendations.

**Method:** A qualitative study using focus groups for data collection was conducted. Thirty-one midwives and three student midwives in four different countries: New Zealand, Australia, Norway, and Denmark participated. Constant comparative analysis was employed from an Actor-network theory perspective.

**Results:** The CTG machine was found to be a multifaceted technology that influences midwives and all other attendants at the labour ward. The CTG is assigned different roles in the complex networks around childbirth. These roles were: The CTG as a babysitter, the CTG as the midwives' partner, the CTG as an agent of shared responsibility, the CTG a protector that 'covers your back', the CTG as a disturber of normal birth, and then the CTG as an invited guest. In all four countries, the midwives described rather similar experiences with the use of the CTG.

**Conclusion:** Application of the Actor-network theory enabled us to understand how midwives perceive cardiotocography. We found that the CTG machine is a multifaceted actant that influences practice by obtaining different roles. It is essential to understand that the assigned roles of the CTG shape everyday use more than the question of evidence-based practice. This controversy needs to be taken seriously when discussing the use of cardiotocograph in low-risk pregnancies.

Drawing on this study, we suggest that Actor-network theory could be a helpful theoretical perspective to critically reflect upon the increasing use of technologies within maternity care.

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## NORWEGIAN WOMEN'S EXPERIENCES AND OPINIONS ON CONTRACEPTIVE COUNSELLING – QUANTITATIVE AND QUALITATIVE ANALYSES

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*Kristin E. Forsberg, RM MSc Community Health Services, Horten, Norway*

**Background:** Women gain access to contraceptives through a consultation, commonly with a doctor and in Norway increasingly with a midwife. For a woman finding the contraceptive that suits best is paramount to her sexual and reproductive health. Contraceptive consultation can provide an opportunity to discuss other issues related to sexual wellbeing.

**Aim:** The aim of the study is to investigate women's experiences and opinions related to contraceptive counselling.

**Methods:** An electronic questionnaire was distributed in 2017–2018. A total of 1917 women responded and 308 women's provided written response to open-ended questions. Descriptive analyses and systematic text condensation were used.

**Results:** Two thirds of the women, 69%, wanted more information about side-effects. Concerns about side-effects was the most frequent (27%) given reason for not using hormonal contraceptives. These findings were supported by the free-text comments, where side-effects emerged as one of the themes, emphasising that women perceived that side-effects were under-communicated. Both qualitative and quantitative analyses showed that women wanted more information on non-hormonal contraceptive methods and were uncertain and divided about the midwife as a contraceptive provider and counsellor. Qualitative analyses added the theme of women-centred care. Women wished for a consultation that would lead to the best choice of contraceptive for them, taking into account their medical history, personal preference and living circumstances. Quantitative findings showed that the majority of women deemed issues of sexual wellbeing important to be addressed but few had been asked.

**Conclusions:** The combined results show that contraceptive consultations need to provide sufficient information on side-effects and alternative non-hormonal methods. Women want individualised care meeting their needs and welcome questions on sexual wellbeing. Midwives' knowledge and competence in this area needs to be made more widely known.

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## FACTORS RELATED TO PROVISION OF LONG-ACTING REVERSIBLE CONTRACEPTION AFTER SURGICAL ABORTION. A SWEDISH NATIONWIDE CROSS-SECTIONAL STUDY

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**Background:** Sweden has the highest abortion rate among the Nordic countries. Long-acting reversible contraceptives (LARC) could be provided at surgical abortion as a safe, practical means of increasing the user rates compared to delayed provision.

**Aim:** To explore if factors related to repeat abortion and inconsistent use of contraception, including sociodemographic factors and psychiatric disorders are associated with provision of LARC at surgical abortion.

**Methods:** A register-based cross-sectional study. From October 2016 to December 2019, 6251 women with procedure codes of surgical abortion were identified in the Swedish National Patient Register (NPR). On an individual level, additional information on sociodemographic factors, psychiatric disorders, and dispensed LARC was retrieved and linked from Statistics Sweden, NPR, and the Swedish prescribed drug register. Generalized logit mixed models were used to explore associations of sociodemographic factors and psychiatric disorders with LARC provision.

**Results:** LARC provision rate at the time of the abortion was 40.2% (n=2515). Sociodemographic factors such as younger age, lower level of education, and being unemployed were associated with LARC provision. In the study population, 42.0% (n=2624) had a psychiatric disorders reported pre- or post-abortion. Women with psychiatric disorders had a higher chance of LARC provision compared to women without psychiatric disorders (aOR 1.21, 95% CI 1.08 - 1.34), with the highest odds among women with personality-, substance use-, and neurodevelopmental disorders.

**Conclusions:** Risk factors related to unwanted pregnancy and abortion such as young age, low educational level, unemployment and psychiatric disorders are associated with higher LARC provision at the time for surgical abortion. However, a majority of women undergoing surgical abortion are not provided with a LARC method. This merits further evaluation of interventions to improve contraceptive counselling provided prior to surgical abortion.

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## STRUCTURED CONTRACEPTIVE COUNSELLING INCREASES UPTAKE OF LONG-ACTING REVERSIBLE CONTRACEPTION AND REDUCES PREGNANCIES AMONG PATIENTS SEEKING ABORTION – A CLUSTER RANDOMISED CONTROLLED TRIAL (THE LOWE TRIAL)

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**Background:** There are no consistent recommendations or models on how to provide effective contraceptive counselling involving informed decision making that results in fewer unintended pregnancies. Today's contraceptive counselling lack structure and contraceptive choice may be affected by provider bias, and subsequent pregnancies may differ between patient groups.

**Aim:** To evaluate the effect of structured contraceptive counselling (SCC) on the uptake of long-acting reversible contraceptives (LARCs) and pregnancy rates.

**Methods:** A cluster randomised controlled trial conducted at abortion, youth and maternal health clinics in Stockholm, Sweden. Clinics were randomised 1:1. In clinics randomised to intervention, health care providers were trained and provided participants with SCC using a study-specific intervention package. Participants in the control clinics received routine counselling. Women aged  $\geq 18$  years without a wish for pregnancy seeking abortion and/or contraceptive counselling were eligible for participation. Primary outcome was choice of LARCs at first visit. Secondary outcomes were LARC initiation at 3 months and pregnancy rates at 3 and 12 months. We used logistic mixed-effects models with random intercept for clinic to account for clustering.

**Results:** From September 2017 to May 2019, 1364 participants were enrolled from 28 randomised clinics. Women receiving SCC chose LARCs to a higher extent than women receiving routine counselling: 267/658 (40.6%) versus 206/680 (30.3%) (OR 2.77, 95% CI 1.99–3.86). SCC lead to higher LARC initiation at three months compared to routine counselling: 213/528 (40.3%) versus 153/531 (28.8%) (OR 1.74, 95% CI 1.22–2.49). Pregnancy rate at 12 months differed significantly among women counselled at the abortion clinics, 13/101 (12.9%) in the intervention group compared to 28/103 (27.2%) in the control group (OR 0.39, 95% CI 0.18–0.88).

**Conclusions:** Structured contraceptive counselling increased LARC uptake in all clinics and significantly reduced unintended pregnancy rates in abortion clinics at the 12 months follow-up.

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## USER SATISFACTION WITH AN INTERVENTION FOR STRUCTURED CONTRACEPTIVE COUNSELLING. RESULTS FROM THE LOWE TRIAL

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**Background:** Interventions for structured contraceptive counselling (SCC) increase use of long-acting reversible contraceptives and reduce numbers of unintended pregnancies. However, these interventions have not been evaluated from a user perspective.

**Aim:** To evaluate user satisfaction with an intervention used in a large trial in Sweden (The LOWE trial).

**Methods:** A cross-sectional study on the intervention group from a cluster randomised trial conducted at 28 clinics in Stockholm, Sweden. Clinics were randomised 1:1 to provide the intervention for SCC or to remain with their standard contraceptive counselling (control). The intervention followed a given structure and included i) an educational video seen by the participant prior to counselling, ii) key-questions to be asked by the provider iii) an effectiveness chart, and iv) a box of contraceptive models. Sexually active women  $\geq 18$  years without a wish to conceive were eligible. This study analyses user (provider and participant) satisfaction with the intervention and whether it was found to aid in contraceptive counselling and contraceptive choice.

**Results:** From Sept 2017 to May 2019, fourteen intervention clinics enrolled 658 participants. Response rate was 88.0% (55/62) and 97.1% (639/658), for providers and participants, respectively. All parts of the intervention received high ratings from providers and participants alike. Providers found the intervention as supportive in counselling. Participants stated they were more supported in contraceptive choice by the educational video and the effectiveness chart than the box of contraceptive models. The intervention was assessed as time-neutral to previous standard counselling. Most providers wished to continue to use all intervention parts.

**Conclusions:** The intervention of SCC had high provider and participant satisfaction. The intervention package could be used in several clinical settings to improve quality in contraceptive counselling and to enhance informed decision making about use of contraceptive methods.

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## SATISFACTION AND EFFECTS OF STRUCTURED CONTRACEPTIVE COUNSELLING ON LONG-ACTING REVERSIBLE CONTRACEPTION AMONG NON-MIGRANT, FOREIGN-BORN MIGRANT AND SECOND-GENERATION MIGRANT WOMEN: EVIDENCE FROM THE LOWE TRIAL, SWEDEN

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**Background:** Lower contraceptive use and higher abortion rates among migrants compared to non-migrants have been reported in European studies. Results from the Swedish LOWE trial showed that structured contraceptive counselling led to higher uptake of long-acting reversible contraception (LARC) compared to standard contraceptive counselling.

**Aim:** We aimed to evaluate secondary outcomes from the LOWE trial among non-migrants, foreign-born migrants and second-generation migrants. We analysed the effects of structured contraceptive counselling on LARC choice, initiation and use, and satisfaction with the counselling material among the three participant groups.

**Methods:** Between 2017 and 2019 a cluster randomised controlled trial (the LOWE trial) was performed at abortion, youth, and maternal health clinics in Stockholm, Sweden. The structured contraceptive counselling material consisted of an educational video, an effectiveness chart, four key questions and a box with contraceptive models.

**Results:** We analysed data from 1295 participants. When adjusted for non-migrants, foreign-born migrants and second-generation migrants we found that participants who had received the structured contraceptive counselling chose LARC to a higher extent (adjusted odds ratio [aOR] 1.59, 95% confidence interval [CI] 1.27–2.00), had higher LARC initiation rates (aOR 1.71, 95% CI 1.31 to 2.22), and higher LARC use within the 12 months follow-up period (aOR 1.52, 95% CI 1.15–2.00) compared to those who had received standard contraceptive counselling.

The majority of the non-migrants, foreign-born migrants and second-generation migrants found all parts in the structured contraceptive counselling material satisfactorily. However, a higher proportion of foreign-born migrants (58/84, 69%) and second-generation migrants (40/54, 74.1%) found the effectiveness chart to be supportive in contraceptive choice compared to non-migrants (259/434, 59.7%) ( $p=0.048$ ).

**Conclusions:** Structured contraceptive counselling increases LARC choice, initiation and use also when adjusted for migration background. A higher proportion of foreign-born migrants and second-generation migrants found the effectiveness chart to be supportive in contraceptive choice.

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## SELF-COMPASSION AND PROFESSIONAL QUALITY OF LIFE AMONG MIDWIVES AND NURSE ASSISTANTS IN FIVE OBSTETRIC SETTINGS IN SWEDEN

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**Background:** Midwives and obstetricians are known to be at heightened risk of both burnout and secondary traumatic stress. Lack of staff and/or resources and a stressful work environment are associated with burnout. Self-compassion is bolstering resiliency against stress, burnout, and emotional exhaustion. The Self-Compassion Scale (SCS) was used to measure self-compassion and The Professional Quality of Life (ProQOL) was used to measure professional quality of life in a Swedish setting.

**Aim:** To explore and psychometrically test instruments measuring self-compassion and professional quality of life among midwives and nurse assistants in five different labour wards in Sweden.

**Methods:** Cross-sectional study with a survey to explore midwives' and nurse assistants' self-compassion and professional quality of life. The Self-Compassion Scale (SCS) and the modified Professional Quality of Life Measurement (ProQOL) were used. Validity was assessed through exploratory factor analysis with principal component analyses. Reliability was estimated using Cronbach alpha. Descriptive statistics, t-test, were calculated to analyse associations and correlations between the subscales of the SCS, the ProQOL and the background variables.

**Results:** Both the SCS and the ProQOL (modified) were adoptable in a Swedish setting with a two-factor solution for both the SCS and the modified ProQOL. The two SCS subscales were named Self-Criticism ( $\alpha=0.85$ ) and Self-Kindness ( $\alpha=0.87$ ). The two ProQOL subscales were named Compassion satisfaction ( $\alpha=0.83$ ) and Compassion fatigue ( $\alpha=0.78$ ). A negative correlation was found between Self-Kindness and Compassion fatigue subscales, between Compassion satisfaction and Compassion fatigue, and between Self-Kindness and Self-Criticism. Midwives were more self-critical than nurse assistants.

**Conclusions:** Understanding and identifying compassion fatigue among midwives is important to managers responsible for quality improvement and practice changes. Further research should focus on interventions to increase midwives' self-compassion and to reduce excessive self-criticism.

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## MIDWIVES' OCCUPATIONAL WELLBEING IN THE NETHERLANDS

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**Background:** Internationally, about 40 percent of midwives report symptoms of burnout, with young and inexperienced midwives being most vulnerable. There is a lack of recent research on burnout among Dutch midwives. The majority of practicing Dutch midwives are aged under 40, which could lead to premature turnover.

**Aim:** The aim of this study was to examine the occupational wellbeing and its determinants of newly qualified and inexperienced midwives in the Netherlands.

**Method:** A cross-sectional survey was conducted with N=896 respondents representing 28 percent of practicing Dutch midwives. A questionnaire was constructed using the Job Demands-Resources model, that consisted of validated scales which measured job demands, job and personal resources, burnout symptoms and work engagement. Data were analysed using regression analysis.

**Results:** Seven percent of Dutch midwives reported burnout symptoms and 19 percent scored high on exhaustion. Determinants of burnout were all measured job demands, except for experience level. Almost 40 percent of midwives showed high work engagement; newly qualified midwives had the highest odds of high work engagement. Master's or PhD-level qualifications and employment status were associated with high work engagement. All measured resources were associated with high work engagement.

**Conclusions:** A small percentage of Dutch midwives reported burnout symptoms, the work engagement of Dutch midwives was very high. However, a relatively large number reported symptoms of exhaustion, which is concerning because of the risk of increasing cynicism levels leading to burnout. Contrary to previous international research outcomes, being young and having less working experience was not related to burnout symptoms of Dutch newly qualified midwives.

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## REASONS OF INTENTION TO LEAVE OF MIDWIVES AND REASONS FOR THE ACTUAL TURNOVER OF MIDWIVES: RESULTS OF A MIXED METHODS STUDY IN THE NETHERLANDS

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**Background:** In the Netherlands the turnover of midwives of a relatively young age is high. This results in an unbalanced field of work in favour of less experienced midwives which is a reason for concern. A proportional distribution of experienced and less experienced midwives creates a stable workforce and contributes to good practice and high quality of care. To retain a healthy workforce, and considering that in the Netherlands almost 90% of pregnant women start care in midwifery care, it is highly important to gain insight into the frequency of intention to leave, the underlying reasons for this intention to leave, and the reasons for actual turnover of midwives.

**Aim:** The aim of this research is to explore factors of the intention to leave and actual reasons of the turnover of Dutch midwives.

**Methods:** We conducted a mixed methods study comprising a questionnaire study followed by semi-structured in-depth interviews with midwives. Data collection took place from 2019 till spring 2021.

**Results:** We found that almost 33% of midwives in our sample (N=896) had the intention to leave midwifery practice. The main reason was a dissatisfaction with the organization of midwifery care. In addition, we interviewed 20 midwives who stopped working as midwives. Three themes emerged from the interviews; organizational factors, personal factors, and occupational factors.

**Conclusions:** We found that leaving the profession mostly involved a combination of factors related to working conditions and a lack of support from colleagues. The results of our study can help policy makers to reflect to the difficulties midwives experience and to support them with a realignment of the organization of midwifery care. We suggest that entrepreneurial and collaboration skills have to be enhanced and to be integrated within midwifery training.

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## PROFESSIONAL COURAGE TO CREATE A PATHWAY WITHIN MIDWIVES' FIELDS OF WORK

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**Background:** The theory of salutogenesis focuses on resources for health and health-promoting processes. In the context of midwives' work, this is not well described despite the importance for occupational health and the intention to remain in the profession. In order to promote a healthy workplace, it is necessary to consider the facilitating conditions that contribute to a sustainable working life.

**Aim:** To explore health-promoting facilitative conditions in the work situation on labour wards according to midwives.

**Methods:** Face-to-face interviews with midwives constituted the empirical material in this classical grounded theory study.

**Results:** The substantive theory of Professional courage to create a pathway within midwives' fields of work emerged as an explanation of the health-promoting facilitative conditions in midwives' work situation. The theory consists of a four-stage process with prerequisite contextual conditions: visualising midwifery, organisational resources and a reflective and learning environment, that were needed to fulfil the midwives' main concern a Feasibility of working as a midwife. This meant being able to work according to best-known midwifery theory and practice in each situation. Positive consequences of a fulfilled main concern were a professional identity and grounded knowledge that enabled the development of the resistant resource professional courage. The courage made it feasible for midwives to move freely on their pathway within the different fields of work extending between normal and medicalised birth and being autonomous and regulated.

**Conclusions:** Professional courage could be seen as a resistance resource, enabling midwives to become resilient when dealing with the unpredictable work situation. The theory can be used to foster health-promoting and sustainable work environments for midwives, which is possible if the organisational preconditions are met, visualising midwifery, having organisational resources and a reflective and learning environment. This could be a key factor in retaining midwives in the profession.

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## FERTILITY RATES AND THE POSTPONEMENT OF FIRST BIRTHS: A DESCRIPTIVE STUDY WITH FINNISH POPULATION DATA

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**Background:** Finland has witnessed the lowest recorded fertility rate and the highest ever mean maternal age at first birth during recent years.

**Aim:** We described the trend of fertility rates, age-specific fertility rates and associated factors, including increased age at the first birth, the elevated proportion of childlessness and maternal education, over a 30-year period in Finland.

**Methods:** A descriptive population-based register study, with the information of 1 792 792 live births from 1987 to 2016 in Finland. Data were gathered from the Finnish Medical Birth Register and Statistics Finland. Main outcome measures were completed fertility rate, total fertility rate and age-specific fertility rate.

**Results:** The total fertility rate has gradually declined and reached the lowest during the study period in 2016: 1.57 children per woman. The mean maternal age at first birth rose by 2.5 years from 26.5 years in 1987 to 29 years in 2016. The proportion of childless women at the age of 50 years increased from 13.6% in 1989 to 19.6% in 2016. By considering the impact of postponement and childlessness, the effect on total fertility rates was between -0.01 and -0.12 points. Since 1987, the distribution of birth has declined for women under the age of 29 and increased for women aged 30 or more. However, start of childbearing after the age of 30 years was related to the completed fertility rate of less than two children per woman. The difference in completed fertility rate across educational groups was small.

**Conclusions:** Increasing rate of childlessness, besides the mean age at first birth, was an important determinant for declined fertility rates, but the relation between women's educational levels and the completed fertility rate was relatively weak.

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## SOCIOECONOMIC DIFFERENCES IN THE ASSOCIATION BETWEEN MATERNAL AGE AND MATERNAL OBESITY: A REGISTER-BASED STUDY OF 707 728 WOMEN IN FINLAND

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**Background:** Previous studies have shown socioeconomic differences in adverse pregnancy outcomes across reproductive years; however, none has examined maternal obesity as a major contributor to adverse pregnancy outcomes.

**Aims:** To examine the association between maternal age and maternal obesity across socioeconomic groups and to determine whether socioeconomic status modifies the association between maternal age and maternal obesity with a view to informing public health policies.

**Methods:** Data for this register-based study were sourced from the Finnish Medical Birth Register and Statistics Finland, using the information of 707 728 women who gave birth in Finland from 2004 to 2015. We used multivariable regression models to assess the association between maternal age and maternal obesity across socioeconomic groups. We further assessed interactions on both multiplicative and additive scales.

**Results:** Across all socioeconomic groups, the adjusted odds ratio (aOR) for the association between maternal age and maternal obesity increased, peaking for women 35 years or older. Using women below 20 years in the category of upper-level employees as a single reference group, in the category of upper-level employees, the aOR and 95% confidence intervals (CI) among women 35 years or older was 1.92 (1.39–2.64) for maternal obesity. Equivalent, the aOR and 95% CI in the category of long-term unemployed was 4.35 (3.16–5.98). Synergistic interactions on both multiplicative and additive scales were found across age and socioeconomic groups.

**Conclusions:** The association between maternal age and maternal obesity was strongest among women 35 years or older with lower socioeconomic status. Population-level interventions that address maternal risk factors from teenage are needed alongside individual-level interventions that target high-risk mothers in areas of low socioeconomic status and maternal obesity.

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BACK

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## WOMEN WHO SMOKE AT START OF PREGNANCY MORE LIKELY REFERRED TO GYNAECOLOGIST DURING PREGNANCY AND BIRTH: RESULTS FROM A COHORT STUDY

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**Background:** Women who smoke during pregnancy make less use of prenatal care; the influence of smoking behaviour on the use of other forms of maternal healthcare is unknown.

**Aim:** This study investigates the association between women's smoking behaviour and maternal healthcare utilization.

**Methods:** We analyzed data from the Dutch Midwifery Case Registration System (VeCaS), period 2012–2019. We included women with a known smoking status, singleton pregnancies, and who had their first appointment before 24 weeks of gestation with the primary care midwife. We compared three groups: non smokers, early stoppers (stopped smoking in the first trimester), and late- or non-stoppers (stopped smoking after the first trimester or continued smoking). Descriptive statistics were used to report maternal healthcare utilization (during pregnancy, birth and six weeks postpartum), statistical differences between the groups were calculated with Kruskal-Wallis tests. Multivariable logistic regression was conducted to assess the association between smoking behaviour and referrals to primary or secondary care.

**Results:** We included 41 038 pregnant women. The groups differed significantly on maternal healthcare utilization. The late- or non-stoppers initiated prenatal care later, had less face-to-face and more telephonic consultations with primary care midwives during pregnancy. Compared to the non smokers, the early- and late- or non-stoppers had significant higher odds of referral to the gynaecologist during pregnancy and birth. Postpartum, the odds of referral to the gynaecologist were lower for the early- and late- or non-stoppers compared to the non-smokers.

**Conclusions:** Although the early- and late- or non-stoppers initiated prenatal care later than the non smokers, they did receive adequate prenatal care (initiation and frequency of contact according to the recommendations). The results suggest that not smoking during pregnancy may decrease the odds of referral to secondary care. This indicates that smoking cessation already before pregnancy could affect the odds referral to secondary care.

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## RISK OF RECURRENT PREECLAMPSIA BY MATERNAL REGION OF BIRTH: A NATIONWIDE POPULATION-BASED STUDY

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**Background:** The incidence of preeclampsia in immigrants varies by maternal region of birth. Women from some regions have higher risk while others have lower risk of preeclampsia



compared with non-immigrants in the host population. Also, recurrence risk of preeclampsia varies across countries. Depending on background incidence, previous research in Scandinavia has reported a recurrence risk of 13–15%, whereas in the United States a 28% recurrence risk has been reported.

**Aim:** To estimate the risk of recurrent preeclampsia in second pregnancy, given preeclampsia in first pregnancy, by maternal region of birth as defined by the Golden Burden of Disease study.

**Methods:** We used data from the Medical Birth Registry of Norway and Statistics Norway (1990-2016). The study population included 645,137 women: 101,066 immigrants and 544,071 non-immigrants. Maternal region of birth was categorized according to the seven super regions of the Global Burden of Disease study (GBD). We calculated absolute risk of preeclampsia up to four subsequent pregnancies for immigrants and non-immigrants overall. We further estimated recurrence risk of preeclampsia in second pregnancy by GBD regions.

**Results:** Compared with women without preeclampsia in the first pregnancy, those who developed the complication had substantially increased risk of preeclampsia in second pregnancy in both immigrant (13% vs 1.0%; adjusted risk ratio (RR) 13.0 (95% confidence interval (CI) 11.3, 15.0)) and non-immigrant women (15% vs 1.5%; adjusted RR 9.8 (95% CI 9.4, 10.2)). Immigrant women from Latin America and the Caribbean had the highest recurrence risk (adjusted RR 17.4 (95% CI 8.0, 37.6)), followed by immigrant women from North Africa and the Middle East (adjusted RR 15.0 (95% CI 10.5, 21.4)).

**Conclusion:** The risk of developing preeclampsia in second pregnancy, given preeclampsia in first pregnancy, differ across maternal region of birth. Recurrence risk was particularly strong for immigrant women from Latin America and the Caribbean.

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BACK

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## TRENDS IN LABOR INDUCTION INDICATIONS: A 20-YEAR POPULATION-BASED STUDY

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**Background:** Use of labor induction has increased rapidly in most middle and high-income countries over the past decade. The reasons for the stark rise in labor induction are largely unknown. We aimed to assess whether the rising rate of labor induction may be explained by changes in rates of underlying indications for induction over time in the population.

**Methods:** The study was based on nationwide data from the Icelandic Medical Birth Register. The rate of labor induction and indications for induction was calculated for all singleton births

in 1997–2018. Change over time was expressed as relative risk (RR), using Poisson regression with 95% confidence intervals (CI) adjusted for maternal characteristics and labor induction indications.

**Results:** The rate of labor induction rose from 12.5% in 1997–2001 to 23.9% in 2014–2018 (crude RR=1.91; 95%CI:1.81–2.01). Adjusting for maternal characteristics had little effect but adjusting additionally for labor induction indications lowered the RR to 1.43 (95%CI:1.35–1.51). Induction was increasingly indicated from 1997–2001 to 2014–2018 by gestational diabetes (2.4% to 16.5%), hypertensive disorders (7.0% to 11.1%), prolonged pregnancy (16.2% to 23.7%), concerns for maternal wellbeing (3.2% to 6.9%) and maternal age (0.5% to 1.2%). No indication was registered for 9.2% of inductions in 2014–2018 compared to 16.3% in 1997–2001.

**Conclusions:** Our results indicate that the increase in labor induction over the study period is largely explained by an increase in various underlying conditions indicating labor induction. However, indications for 9.2% of labor inductions remain unexplained and warrant further investigation.

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## ATTITUDES TOWARDS CAESAREAN SECTION, INTERPROFESSIONAL TEAMWORK AND ORGANIZATIONAL CULTURE AT FIVE SWEDISH MATERNITY WARDS

BACK  
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**Background:** A CS is a life-saving intervention when medically indicated, but it can also lead to adverse short- and long-term health effects for the mother and the child. International data suggest that a large proportion of primary CS are medically unindicated and show large variations between countries, regions and even between hospitals. Over 90% of the variation in the rates of CS among first-time mothers are related to arrest of labour and fetal intolerance to labour, indications that require subjective decision making by the care provider. It is suggested that labour wards with low incidence of CS have a culture that support vaginal birth and midwifery ideology. Other factors that might be important, and that has not been studied previously, are successful interprofessional teamwork and organizational culture.

**Aim:** To study attitudes towards supporting vaginal birth, and whether these attitudes are related to organizational culture and interprofessional teamwork.

**Methods:** Design: A cross-sectional study using three validated questionnaires; the Labour Culture Survey (LCS), the Assessment of Collaborative Environments (ACE-15) and a revised version of the Organizational Readiness for Change (S-ORC). Setting: Five labour wards in Sweden, representing labour wards with the lowest and the highest incidence of CS, different types of organization, and urban and regional areas. Inclusion criteria: Midwives, physicians and nurse assistants working at the participating labour wards. Analysis: Descriptive statistics, t-tests, ANOVA, and logistic regression will be used to analyse the data.

**Results:** 479 professionals participated; 256 midwives, 106 physicians, and 117 nurse assistants. The response rate was 69%. The data is currently under analysis and will be presented at the conference.

**Discussion:** The results from this study will contribute to the understanding of how organizational culture and interprofessional teamwork are related to attitudes toward CS. This knowledge can be used to tailor implementation strategies for supporting vaginal birth.

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## THE INFLUENCE OF SPECIFIC ACUPUNCTURE TREATMENT ON THE DURATION OF 1<sup>ST</sup> STAGE OF LABOUR: RANDOMIZED INTERVENTION PILOT STUDY

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**Background:** Previous research has indicated that acupuncture given in the last weeks of pregnancy can affect the duration of labour and increase the probability of a normal birth. No research has previously been done on its effectiveness in Iceland.

**Aim:** The aim of the study was to investigate whether systematic acupuncture treatment, given to primiparous women at pre-defined acupuncture points once a week from gestational week 36+0, shortens the 1st stage of birth.

**Methods:** The study was a randomized intervention pilot study on 28 participants. Fourteen women in the intervention group received acupuncture treatment once a week from week 36+0 of pregnancy. The main variable of the study was the duration of the 1st stage of labour as well as the average speed of dilatation during the 1st stage. Additional variables were related to the birth outcomes.

**Results:** The results did not show a significant difference between groups in duration of the 1st stage of labour. However, average 1st stage duration among women in the intervention group was 202 minutes shorter and they went on average 28 minutes faster through each centimetre of dilation, than women in the control group, but the latent phase of birth was on average longer. Women in the intervention group were more likely to have spontaneous onset of labour and had shorter gestation on average than women in the control group.

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**Conclusions:** Previous studies have shown both positive and negative effect of late pregnancy acupuncture on the 1st stage of labour. This study adds to the existing knowledge, but further research is needed with a larger sample and preferably also on women's personal experience of the treatment. It is essential that both midwives and pregnant women are well informed about the risks and benefits of acupuncture and that such treatment is readily available.

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## PREVALENCE OF AMNIOTOMY IN SWEDEN: A NATIONWIDE REGISTER STUDY

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**Background:** There is a global concern about the escalating use of labour interventions in low-risk women. Despite the lack of evidence for spontaneous labour, amniotomy is commonly used. However, the prevalence is not known. Information on prevalence and possible differences between hospitals offers opportunity for comparisons, identification of best practice, and clinical improvement.

**Aim:** To explore the prevalence of amniotomy in Sweden in relation to variations between hospitals and over time.

**Methods:** This was a retrospective nationwide register-based study, including data from January 2017 to June 2020. Data were collected from the Swedish Pregnancy Register which covers 93% of all births in Sweden. Data were analysed in relation to Robson Group (RG) 1 and 3, using descriptive statistics and chi-square test.

**Results:** During the study period a total of 330 913 women gave birth, whereof 134 493 (40.6%) underwent amniotomy. The prevalence was significantly higher for RG 1 compared to RG 3, 41.1% vs. 32.3% ( $p < 0.001$ ). In RG 1 and RG 3, the highest prevalence was reported at the hospitals with <1000 births annually, while the lowest prevalence was reported at University hospitals, 42.3% vs. 34.5% ( $p < 0.001$ ). The overall prevalence did not change during the study period ( $p = 0.678$ ), thus, for RG 1 and RG 3, the prevalence of amniotomy decreased from 37.5% to 34.1% ( $p < 0.001$ ).

**Conclusions:** Amniotomy is a commonly used labour intervention that is used in more than one third of all births in Sweden. Regarding prevalence in RG 1 and RG 3, significant variations between hospitals and a small but significant decrease over time, were observed. However, the overall prevalence remained the same, indicating an increase of amniotomy in other Robson Groups.

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## THE IMPACT OF THE INTRODUCTION OF INTRAPARTUM FETAL ECG ST SEGMENT ANALYSIS (STAN®). A POPULATION STUDY

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**Background:** ST segment analysis (STAN) of the fetal electrocardiogram (ECG) was introduced as an adjunct to cardiotocography (CTG) for intra-partum fetal monitoring 30 years ago. Previous studies have not had sufficient statistical power to draw conclusions about the effect of STAN on fetal or neonatal mortality.

**Aim:** We examined the impact of the introduction of STAN on the occurrence of fetal and neonatal deaths, Apgar scores of <7 at 5 minutes after birth, intrapartum Cesarean sections, and instrumental vaginal deliveries.

**Methods:** Data were retrieved from the Medical Birth Registry of Norway for the period 1985-2014 and were linked to the Education Registry and the Central Person Registry of Norway. The study included 1,132,022 singleton births with a gestational age of 36 weeks or beyond. Information about the year of STAN introduction was collected from every birth unit in Norway by a questionnaire. We applied a linear probability model with hospital-fixed effects and with adjustment for potentially confounding factors. In our model, the prevalence of the outcomes before and after the introduction of STAN were compared within each birth unit.

**Results:** Twenty-three birth units, representing 76% of all births in Norway, had introduced the STAN technology. During the study period, there was a reduction in the proportion of stillbirths and neonatal deaths, an increase in Apgar scores <7 at five minutes after birth, an increase in intrapartum Cesarean sections and instrumental vaginal deliveries. The introduction of STAN had no effect on the occurrence of fetal deaths, neonatal deaths, intrapartum Cesarean sections, or instrumental vaginal deliveries, but was associated with the increase in babies born with low Apgar score.

**Conclusions:** The introduction of STAN did not reduce the occurrence of stillbirths, neonatal deaths, intrapartum Cesarean sections, or instrumental vaginal deliveries, but contributed to a small increase in neonates with low Apgar scores.

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## PSYCHOLOGICAL HEALTH OF PREGNANT AND POSTPARTUM WOMEN BEFORE AND DURING THE COVID-19 PANDEMIC

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**Background:** The COVID-19 pandemic is likely to influence psychological health of pregnant and postpartum women.

**Aim:** To establish and compare women's antenatal and postpartum psychological health before and during the COVID-19 pandemic.

**Methods:** We conducted a non-concurrent cross-sectional study among 1145 women living in the Dutch-speaking part of Belgium, 541 pregnant and 604 postpartum women. We measured mental health with the Whooley questions, Generalized Anxiety Disorder 2-item (GAD-2) and the Edinburgh Postnatal Depression Scale (EPDS) and compared the scores of pregnant and postpartum women before and during the COVID-19 pandemic.

**Results:** No differences were observed in the Whooley, GAD-2 or EPDS scores among pregnant women. The postpartum total GAD-2 scores before vs during the pandemic showed significant differences. Controlling for confounders, we observed a small main positive effect of having an infant during time of COVID-19 ( $F(1.13)=5.06, p.025, d.27$ ). The effect was significantly larger for women with (a history of) perinatal psychological problems ( $F(1.12)=51.44, p<.001, d.82$ ). Emotional support was significantly related to GAD-2 scores of postpartum women during the pandemic ( $F(1.90)=35.54, p<.001$ ). Postpartum women reported significant higher effects of the pandemic on their behavior compared to pregnant women ( $p.034$ ).

**Conclusion:** The COVID-19 pandemic seems to have a positive effect on postpartum women during the first year postpartum, in particular for women with (a history of) perinatal psychological problems and for those women who experienced emotional support. The findings suggest that less external stimuli caused by lockdown restrictions might have a positive effect on postpartum women's emotional wellbeing. The sample consisted of white, educated women in a relationship and information regarding the extent of exposure to adverse COVID-19 consequences was lacking. We relied on self-selection and self-report. The postpartum pandemic sample was small.

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## PSYCHOLOGICAL WELL-BEING AND WORRIES AMONG PREGNANT WOMEN DURING THE FIRST PHASE OF THE COVID-19 PANDEMIC COMPARED WITH A HISTORICAL GROUP: A HOSPITAL-BASED CROSS-SECTIONAL STUDY

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**Background:** A pandemic may negatively influence psychological well-being in the individual.

**Aim:** We aimed to assess the potential influence of the first national lockdown due to the COVID-19 pandemic on psychological well-being and the content and degree of worries among pregnant women in early pregnancy.

**Methods:** Using self-reported clinical data collected routinely around gestational week 10, we compared psychological well-being and worries among pregnant women during the first phase of the pandemic (COVID-19 group) (n=685), with pregnant women the year before (Historical group) (n=787). Psychological well-being was measured by the five-item World Health Organization Well-being Index (WHO-5) using a score  $\leq 50$  as indicator of reduced psychological well-being. Mean scores and prevalence of women with WHO-5 score  $\leq 50$  were compared across the two groups using general linear and log-binomial regression analysis, respectively. The Cambridge Worry Scale (CWS) was used to measure the content and degree of major worries. To detect differences between groups, Pearson's Chi-Squared test was used.

**Results:** We found no differences in mean WHO-5 score between groups (mean difference (MD) 0.1 (95% CI: -1.5 to 1.6)) or in the prevalence of women with WHO-5 score  $\leq 50$  (prevalence ratio (PR) 1.04 (95% CI: 0.83 to 1.29)) in adjusted analyses. A larger proportion of women in the COVID-19 group reported major worries about *Relationship with husband/partner* compared with the Historical group (3% (n=19) vs 1% (n=6),  $p=0.04$ ), and 9.2% worried about the possible negative influence of the COVID-19 restrictions.

**Conclusions:** Our findings indicate that national restrictions due to the COVID-19 pandemic did not influence the psychological well-being or the content and degree of major worries among pregnant women. However, a larger proportion of women in the COVID-19 group reported major worries concerning *Relationship with husband/partner* compared to the Historical group and a small percentage reported worries about the negative impact of the COVID-19 restrictions on antenatal care.

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## BEING IN THE SHADOW OF THE UNKNOWN – SWEDISH WOMEN'S LIVED EXPERIENCES OF PREGNANCY DURING THE COVID-19 PANDEMIC, A PHENOMENOLOGICAL STUDY

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**Background:** The COVID-19 pandemic has had a profound effect on the emotional well-being of expecting mothers. Sweden's unique strategy for managing COVID-19 involved no national lockdown. Emphasis was instead placed on limiting crowding and asking citizens to practice social distancing measures.

**Aim:** To gain a deeper understanding of how women not infected by SARS-CoV-2 experienced pregnancy during the COVID-19 pandemic in Sweden.

**Methods:** This was a qualitative study with a reflective lifeworld approach. Fourteen women that had not contracted COVID-19 and who were pregnant during the first and second wave of the pandemic were interviewed. Data were analysed with a phenomenological reflective lifeworld approach.

**Results:** The essence of the women's experiences of being pregnant during the COVID-19 pandemic was best described as being in the shadow of the unknown, where the COVID-19 pandemic could at times totally overshadow the experience of being pregnant, while at other times, rays of sunlight peeked through the clouds. The experience was characterised by having to deal with the uncertainties caused by the pandemic and feelings of being stuck in an information echo. Women felt socially isolated and had to face maternal check-ups without the support of their partners. There was, however, a strong trust in maternal health-care services despite the lack of information available.

**Conclusions:** Being in the shadow of the unknown represents the uncertainties posed by the COVID-19 pandemic on the experience of pregnancy. Sufficient information, a companion of choice and screening for emotional well-being are important factors in maternity care during pandemics.

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## GIVING BIRTH AND BECOMING A PARENT DURING THE COVID-19 PANDEMIC: A QUALITATIVE ANALYSIS

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**Background:** When Europe was hit by the COVID-19 pandemic, changes were made in maternal care to reduce infections. In Norway, hospital maternity wards, postnatal wards, and neonatal units' companions and visitors were restricted.

**Aim:** To explore the experiences of giving birth and becoming a parent in Norway during the COVID-19 pandemic.



**Methods:** The study is based on the responses from women who provided in-depth qualitative accounts to the ongoing Babies Born Better (B3) survey version 3 during the first year of the COVID-19 pandemic. The responses were analysed with inductive thematic analysis.

**Results:** In all, 806 women who gave birth in 42 of 45 available birthing units across Norway, regardless of parity and mode of birth, were included. The qualitative analysis resulted in four themes: 1) Pregnancy as a stressful waiting period; 2) Feeling lonely, isolated, and disempowered without the partner; 3) Sharing experiences and becoming a family; and 4) Busy postnatal care without compassion.

**Conclusion:** The COVID-19 pandemic seems to have affected women's experiences of giving birth and becoming a parent in Norway. The restrictions placed on companionship by the healthcare facilities varied between hospitals. However, the restrictions seem to have affected a range of aspects related to women's experiences of late pregnancy, early labour and birth and the early postpartum period. Early postnatal care is the area of care that seems to have been most negatively affected and clearly requires more attention.

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## THE INFLUENCE OF IMPLEMENTING THE BABY-FRIENDLY HOSPITAL INITIATIVE ON HEALTHCARE PROFESSIONALS' BREASTFEEDING ATTITUDES AND HOSPITAL PRACTICES IN DELIVERY AND NEONATAL INTENSIVE CARE UNITS

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**Background:** The Baby-Friendly Hospital Initiative (BFHI) and Neo-BFHI targeted at neonatal intensive care units (NICU) represent a global effort to support breastfeeding. Commitment to the BFHI program is associated with longer duration and exclusivity of breastfeeding and improvements in hospital practices. Further, healthcare professionals' (HCPs) breastfeeding attitudes are associated with quality of care and ability to provide professional support for breastfeeding.

**Aim:** The aim of this study was to assess HCPs' breastfeeding attitudes and hospital practices before and after implementation of the BFHI and Neo-BFHI.

**Methods:** Using a quasi-experimental pretest–posttest study design, healthcare professionals (N=131) from the single hospital labor and delivery, maternity care, and neonatal intensive care were recruited before and after the Baby-Friendly Hospital Initiative intervention in 2017 and 2019. Breastfeeding attitudes with validated Breastfeeding Attitude Questionnaire, statistics about breastfeeding-related hospital practices and background characteristics were collected.

**Results:** The healthcare professionals' breastfeeding attitude score increased after the implementation of the Baby-Friendly Hospital Initiative ( $p < .001$ ) and became breastfeeding favorable among all professional groups and in each study unit. Being a midwife ( $p < .001$ ) or physician ( $p = .003$ ) and previous education on breastfeeding ( $p = .005$ ) positively influenced breastfeeding attitudes. Participants' unit ( $p = .249$ ), age ( $p = .574$ ), work experience ( $p = .818$ ), and personal experiences with breastfeeding were not correlated with breastfeeding attitude.

Positive changes in breastfeeding-supportive hospital practices were achieved. The infants had significantly more frequent immediate and uninterrupted skin-to-skin contact with their mothers. The rate of early breastfeeding, as well as the number of exclusively breastfed infants, increased.

**Conclusions:** This study increases awareness on the healthcare professionals' breastfeeding attitudes in relation to BFHI and Neo-BFHI as well as the association of the Baby-Friendly Hospital Initiative with positive outcomes in hospital practices in NICU care.

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## MOTHERS' PERCEPTIONS AND EXPERIENCES OF BREASTFEEDING SUPPORT IN BABY-FRIENDLY HOSPITALS: AN INTEGRATIVE REVIEW

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**Background:** Baby-Friendly Hospital Initiative (BFHI) aims to improve breastfeeding by implementing *the Ten Steps to Successful Breastfeeding (Ten Steps)* into routine breastfeeding support in birth hospitals. Maternal perspective on breastfeeding support is important to consider for having a better understanding of breastfeeding support in the BFHI environment.

**Aim:** To review and synthesize existing literature on maternal perceptions and experiences of breastfeeding support in Baby-Friendly Hospitals.

**Methods:** A systematic integrative review was conducted in October 2020 in five databases: PubMed, CINAHL, Cochrane, Scopus, Web of Science. Original studies published in English exploring maternal viewpoint of breastfeeding support in Baby-Friendly Hospitals were included. Two reviewers independently screened the titles ( $n = 1012$ ), abstracts ( $n = 176$ ), and full texts ( $n = 39$ ). Fifteen studies were included in the review. Data were analyzed using inductive content analysis.

**Results:** From maternal perspective, breastfeeding support in Baby-Friendly Hospitals was not completely in accordance with *the Ten Steps*. Mothers perceived shortcomings with the early initiation of breastfeeding (Step 4) as well as lack of support to breastfeed on demand (Step 8). Furthermore, staff members did not always ensure the continuity of breastfeeding support after hospital discharge (Step 10). Mothers experienced breastfeeding support that was contradictory to *the Code of Marketing of Breastmilk Substitutes*; for example, mothers received formula gift packs during hospital stay. Some mothers would have required more efficient support concerning problems with breastfeeding. Mothers in the Baby-Friendly Hospitals experienced

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breastfeeding support that was better in line with *the Ten Steps* compared to mothers in not-Baby-Friendly Hospitals.

**Conclusions:** Mothers giving birth in the Baby-Friendly Hospitals did not perceive breastfeeding support completely in compliance with *the Ten Steps*. Regular monitoring and consideration of maternal perceptions and experiences are required to ensure that breastfeeding support in Baby-Friendly Hospitals is in line with the standards of the initiative and fulfils maternal expectations and needs.

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## BREASTFEEDING SUPPORT IN A BIRTH HOSPITAL BEFORE AND AFTER DESIGNATION TO THE BABY-FRIENDLY HOSPITAL INITIATIVE: A MATERNAL PERSPECTIVE

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**Background:** Baby-Friendly Hospital Initiative (BFHI) aims to protect, promote, and support breastfeeding in birth hospitals by emphasizing evidence-based breastfeeding support practices. Maternal perceptions of breastfeeding support are important to consider because mothers are dependable on professional support to successfully breastfeed. Evidence about the impact of the BFHI designation on breastfeeding support in the hospital from maternal perspective is yet scarce.

**Aim:** To examine maternal perceptions of postnatal breastfeeding support in the hospital before and after the designation to Baby-Friendly Hospital. Second aim was to identify maternal and infant characteristics associated with the maternal perception of breastfeeding support.

**Methods:** A quasi-experimental non-equivalent two-group study was carried out in one postnatal ward and one neonatal intensive care unit in a birth hospital in Finland. Data were collected in 2017 and 2019 from postpartum mothers before (pre-test group n=162) and after (post-test group n=163) hospital's designation to BFHI using a questionnaire. Data were analyzed using statistical methods.

**Results:** Mothers in the post-test group perceived better breastfeeding support compared mothers in the pre-test group (median 6.1 vs 5.0,  $p < 0.001$ ). In the pre-test group, multipara mothers and mothers who gave birth to an infant with low Apgar scores ( $< 7$ ), perceived breastfeeding support less in line with Baby-Friendly standards than primiparas or mothers with an infant of high Apgar scores ( $\geq 7$ ). In the post-test group, mothers who experienced a pre-term birth (GA $<37$  weeks) perceived breastfeeding support less Baby-Friendly compared to mothers with a full-term birth.

**Conclusions:** According to maternal perceptions, breastfeeding support was more in line with the evidence-based standards of BFHI after the hospital was designated to Baby-Friendly

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Hospital compared to before. Designation improved especially multipara mothers' perception of breastfeeding support. Further research and clinical emphasis are needed to confirm that mothers of pre-term infant are also provided with Baby-Friendly breastfeeding support.

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## MATERNAL BREASTFEEDING ATTITUDES AND THEIR ASSOCIATION WITH THE DURATION OF EXCLUSIVE BREASTFEEDING

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**Background:** Maternal breastfeeding attitudes are predictive of breastfeeding duration and exclusivity. Little is known about changes in maternal breastfeeding attitudes during breastfeeding and their association with breastfeeding duration.

**Aim:** To describe maternal breastfeeding attitudes immediately and four months after birth, and factors associated with attitudes. Furthermore, the association between maternal attitudes and the duration of exclusive breastfeeding was examined.

**Methods:** The study was conducted in one central hospital in Finland in 2017–2018. Both primiparous and multiparous mothers delivered in any pregnancy week were recruited at postnatal ward before discharge. Participating mothers were asked to fill in a short demographic questionnaire and the Iowa Infant Feeding Attitude Scale (IIFAS). The IIFAS questionnaire was mailed to the mothers again four months later. The duration of exclusive breastfeeding was asked via SMS messages two weeks, one, four and six months after the birth. Statistical methods included descriptive statistics, Wilcoxon-Mann-Whitney test and regression analysis.

**Results:** A total of 162 mothers participated in the study and 60.5% (n=98) completed the IIFAS at the four months' measurement point. The mean IIFAS scores were 65.5 (SD 7.3) and 66.9 (SD 7.5) respectively (p=0.869). Mother's 25–34 years age, high educational level, planned pregnancy, not using epidural or spinal anesthesia during delivery and breastfeeding of previous child were associated with more breastfeeding-favourable attitudes. Breastfeeding attitudes were not significantly associated with the duration of exclusive breastfeeding. However, nearly half of the mothers (48.8%) breastfed exclusively at four months' and nearly one fourth breastfed exclusively at six months' point (24.1%).

**Conclusions:** Maternal breastfeeding attitudes were neutral and quite stable during the four months after birth. Sociodemographic factors are difficult to change. Therefore, with developing and testing attitude-focused interventions national breastfeeding recommendations could be met.

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## SOCIAL MATERNITY CARE: A CARE CONCEPT CONTRIBUTING TO THE REPRODUCTIVE HEALTH OF WOMEN IN VULNERABLE SITUATIONS

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**Background:** Adverse perinatal outcomes show large variations within the Netherlands and are caused by an accumulation of medical and non-medical factors. The effect of poverty and stress on outcomes seems most apparent in pregnant women without a migration background. The Dutch care system is challenged to address this issue. There is a national call for a transition to 'social maternity care' where obstetric and social care professionals and organizations work together to establish adequate care for women in vulnerable situations. In Groningen and Limburg, the northern and southern part of the Netherlands, the combination of pregnancy and living in poverty without a migration background is more common and evidently associated with adverse perinatal outcomes. Professionals and user organizations in these regions are strongly committed to work together for a transformation to social maternity care. Our study is designing and implementing approaches to enhance this collaboration.

**Aim:** To implement and evaluate two multidisciplinary approaches where maternity care professionals and youth healthcare nurses collaborate to identify pregnant women in vulnerable psychosocial situations and to refer them to the social services for tailored care and support if necessary.

**Methods:** In 2020, we started a mixed method study with maternity care professionals, youth health care nurses and women in vulnerable situations in both regions: 1) a cross-sectional study in participating midwifery practices to monitor identification and referral of women in vulnerable situations, 2) a survey among professionals to evaluate the approaches 3) a qualitative study with in-depth interviews with women to explore their experiences of care received.

**Results:** We will present results of the cross-sectional study (n=1000) and survey among professionals (n=60). Preliminary results are promising regarding identification of vulnerability and collaboration between medical and social professionals.

**Conclusions:** These approaches offer opportunities to improve care and outcomes of women living in vulnerable situations.

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## IMPROVING MATERNITY CARE FOR VULNERABLE WOMEN: AN EVALUATION OF TWO INTERVENTIONS.

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**Background:** Within the Netherlands there are regional variations regarding the amount of adverse perinatal outcomes. These adverse outcomes are mainly associated with non-medical risk factors. In the Northern and Southern part of the Netherlands, a relatively large amount of women live in poverty. Within this group, the cumulation of medical risk factors and factors associated with poverty and deprivation increase the risk of adverse outcomes. Increasing awareness and the national urgency to improve perinatal health has led to the development of a variety of maternity care interventions. Within the southern and the northern part of the Netherlands two different interventions have been developed.

**Aim:** To evaluate the two interventions on 1) the identification of vulnerable women, 2) the establishment of the collaboration with Youth Health Care and social care services, and 3) to gain knowledge regarding the experiences of clients and professionals with the approaches. This abstract focuses on the Northern approach.

**Methods:** We performed a mixed methods study comprising of a cross-sectional study to assess the prevalence of non-medical risk factors and referrals (n=1000), 2) a survey based upon the validated Measurement Instrument of Determinants of Innovations (MIDI) among perinatal health care professionals (n=60), and 3) in-depth interviews with women, professionals and stakeholders (n=40).

**Results:** Preliminary results show that there is a variety among professionals in how interventions are adopted. At the conference we will present the results from the cross-sectional study and the survey.

**Conclusions:** The way interventions are adopted differ. With our study results we will optimize the implementation of specific interventions targeted for vulnerable pregnant women.

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## OVERVIEW OF THE IMPLEMENTATION RATE OF INTERVENTIONS ALIGNED FOR PREGNANT WOMEN IN A VULNERABLE SITUATION IN NORTH-NETHERLANDS

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**Background:** A relatively high percentage of pregnant women in North-Netherlands is considered vulnerable to adverse pregnancy outcomes. In this region, an intergenerational transfer of poverty exists and is leading to the transfer of unhealthy lifestyles and associated diseases to subsequent generations. To improve perinatal and maternal health, various interventions have been developed, tackling the behavioural determinants of risk behaviour. The proper use and implementation of these complex interventions is vital to achieve optimal results.

**Aim:** The aim of this study was a) to give an overview of the various interventions for vulnerable pregnant women in North-Netherlands, and the implementation rate per intervention; and b) to evaluate the concept of 'vulnerability'.

**Methods:** In this cross-sectional cohort study, an online survey was conducted via the Pregnancy and Childbirth North-Netherlands consortium in autumn 2019.

**Results:** 202 health professionals have completed the survey. About forty interventions for vulnerable pregnant women were identified, but professionals lacked an overview of interventions available in their region. The Psychiatry-Obstetrics-Pediatrics outpatient clinic, Centering-Pregnancy and the screening instrument ALPHA.NL are the most well-known and implemented interventions. A multitude of factors, determinants and signals of vulnerability were mentioned. Most health professionals indicated that a policy has been drawn up around the term 'vulnerable pregnant woman', but only a few can provide a proper definition of 'vulnerability'. Professionals estimate the proportion of vulnerable pregnant women in their practice from 9-27%.

**Conclusions:** Many interventions have been developed for vulnerable pregnant women. But not every professional is familiar with these interventions and the interventions are not always implemented as intended. Health professionals themselves give meaning to concepts such as vulnerability and (un)consciously use certain values in their thinking and acting. If professionals do not use the intervention as intended, this may mean that the intervention does not work or even has a negative effect.

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## EXPERIENCES AND NEEDS OF VULNERABLE WOMEN WITH REGARD TO RECEIVING ADDITIONAL INTERVENTIONS IN MATERNITY CARE; A QUALITATIVE STUDY

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**Background:** Vulnerable pregnant women are at risk of developing adverse pregnancy outcomes. In the north of the Netherlands, many vulnerable women of Dutch origin live in rural areas and are more likely to have unfavourable lifestyle characteristics than women in other parts of the country.

Tailoring an intervention to the needs and wishes of vulnerable pregnant women can reduce the risk of adverse outcomes and empower vulnerable women. Besides standard prenatal care, many additional interventions have been developed for vulnerable pregnant women. We do not know to what extent these additional interventions suit the needs of vulnerable women in the Northern Netherlands.

**Aim:** To gain insight into the experiences and needs of vulnerable women who receive additional maternity care interventions in the Northern Netherlands.

**Methods:** Qualitative research by means of semi-structured interviews between October 2019 and December 2020 with 17 vulnerable pregnant women living in the Northern Netherlands.

**Results:** We found three themes that reflect the experiences and needs of vulnerable pregnant women in relation to the intervention they received. These themes relate to the care provided by health professionals, to the impact of being offered an intervention, and to practical issues related to receiving an additional intervention. We found that related to practical issues the needs of vulnerable pregnant women varied. Common needs were the wish to receive tailor-made information, and the wish for the intervention to be specifically tailored to their problems. Women wish to be taken seriously and treated without prejudice with respect and dignity.

**Conclusions:** Being vulnerable and being offered additional care evoked diverse reactions and emotions from pregnant women. We recommend that health professionals ensure open and clear communication with women, that they ensure continuity of care and relationship-centered care, and that they become aware of the process of stigmatization of vulnerable women.

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## OUTCOMES OF FREESTANDING MIDWIFERY UNITS AND ALONGSIDE MIDWIFERY UNITS: A SYSTEMATIC REVIEW

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**Background:** Midwifery units, both freestanding and alongside, are increasingly popular amongst healthy women in low-risk pregnancies. Midwives have a leading role in antenatal education on choice in place of birth. In order to fulfil their informative roles and support women in making informed decisions on place of birth, midwives must be able to access evidence based information about the benefits and risks associated with different birth places.

**Aim:** To compare maternal and neonatal outcomes and obstetric interventions in low-risk women by planned place of birth in freestanding or alongside midwifery units to obstetric units in hospitals.

**Methods:** Scopus, Cinahl, PubMed and Proquest databases were used to identify studies in this systematic review. Search terms where: midwifery unit, birth centre, birthplace, outcome and midwifery. After reviewing 459 articles, ten articles met inclusion criteria and evaluation of study quality. Participants were over 102,000 women who planned to give birth in midwifery units, compared to around 820,000 women who planned to give birth at obstetric units.

**Results:** Studies point to a better outcome for healthy women in low-risk pregnancies who plan to give birth at midwifery units than for those who plan to give birth in obstetric units. They had an increased likelihood of spontaneous vaginal birth and were less likely to need interventions including; epidural analgesia, augmentation of labour, instrumental delivery, and caesarean section. Rates of maternal outcome including episiotomy and postpartum haemorrhage were generally lower in midwifery units. Transfer rates ranged from 14.8% to 33.9%, were nulliparous women had higher rates of transfer than multiparous women. There was not a significant difference in neonatal outcomes.

**Conclusions:** When choosing their place of birth in pregnancy women should be informed on different birth outcomes in different birth places, including low intervention rates and positive maternal outcomes in planned midwifery unit births.

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## A FREESTANDING MIDWIFERY UNIT: AN OVERVIEW OF PERINATAL AND NEONATAL OUTCOMES IN 2018-2020

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*Emma Marie Swift RM PhD, Associate professor of midwifery,*

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**Background:** There is one out-of-hospital birth center in Iceland which provides continuity of care for healthy women in low-risk pregnancies from the 34th week of pregnancy. Healthy women in low-risk pregnancies are more likely to give birth without interventions at midwifery-led units compared to hospitals, with better outcomes. No research has been published about outcomes of women who give birth at the Icelandic birth center.

**Aim:** To describe outcomes of women that intended to give birth at the birth center and their newborns between January 2018 and December 2020.

**Methods:** Data was collected from patient files. Demographic characteristics (parity, gestational age, e.t.c.), birth characteristics and outcomes (i.e. waterbirth, postpartum haemorrhage, Apgar score e.t.c.) and transfer to hospital care were described. Significance tests were performed to examine whether there was a difference between the outcomes of nulliparas and multiparas.

**Results:** A total of 326 women intended to give birth at the birth center. More than half (63,8%) gave birth at the birth clinic and birthed without intervention except one, who had an episiotomy. The ratio of nulliparas was 37,5% compared to 62,5% multiparas. About half (52,7%) birthed in water and 53,1% in an upright position. Postpartum haemorrhage (>500 ml) was rare (13,4%). None of the newborns had Apgar-scores under 7 after 5 minutes. Most transfers happened during the 1st stage of labour. The cesarian rate was 3,7% (n=12). Nulliparous women were significantly more likely to be transferred to a hospital than multiparous women (60,7% vs. 20,5%).

**Conclusions:** The results show a low rate of intervention. They indicate that an out-of-hospital birth center is a safe option for healthy women in low-risk pregnancies and their newborns. These results are aligned with international literature about birth outcomes for women giving birth at midwifery-led units.

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## AASTRIKA MIDWIFERY CENTER, A MODEL FOR MIDWIFERY-LED CARE IN INDIA

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**Background:** Transforming the birthing experience of millions, Aastrika- a Nilekani Philanthropies Initiative is committed to a future in which every woman is treated with respect and dignity during childbirth, and the right treatment is provided at the right time. This originates from the Government of India's effort to educate a new cadre of 90,000 midwives according to international standards and implementing the 24-hours-7-days-a-week midwifery-led birthing units across the country.

**Aim:** The project aiming at providing new evidence-based knowledge of how a midwifery-led care unit in a private hospital in India can act as a model and can be scaled up in India and elsewhere in South East Asia.

**Methods:** Aastrika's midwifery-led care model will be implemented and evaluated using a process evaluation, by the University of Gothenburg, Sweden.

**Results:** Fulfilling a critical gap that is a priority area for the government of India, Aastrika Midwifery Centre will a) Promote continuous support for women during the antenatal period, labour, birth and postpartum, and protect physiological birth. b) Develop routines for safe and sustainable in-service education for healthcare professionals such as midwives, nurses and gynecologists on respectful maternity care, continues support, and companionship of choice focusing on promoting normal physiological birth. c) Offer an evidence-based clinical placement site for midwifery student, to practice the philosophy of midwifery.

**Conclusions:** To conclude, to reach the Sustainable Development Goal 3 on health, leaving no one behind, it is of the highest importance to display a model of normal physiological birth across high, middle, and low-income population in India.

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0108

## IMPROVING MIDWIFE LED CONTINUITY OF CARE (MLCC) BY TWINNING MIDWIVES WORKING IN COMMUNITY AND HOSPITAL SETTINGS WITHIN THE NETHERLAND

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*Liselotte Kweekel, RM, MSc, twinning coordinator for KNOV, the Netherlands*

*Erna Kerkhof, RM, MSc, community twin supporter for KNOV, the Netherlands*

*Bernice Engeltjes, hospital twin supporter for KNOV, the Netherlands*

**Background:** We used the twinning method defined as 'a cross-cultural reciprocal process where two groups of people work together to achieve joint goals' (Cadée et al. 2016) to support 12 pairs of midwives to collaborate on their shared goal of improving Midwife Led Continuity of Care (MLCC) in the Netherlands. For a period of two years, 2021-2022, all twins will participate in an intensive structured program. Twin pairs are supported to set up small tangible projects that can contribute to the implementation of MLCC as the primary goal of the project.

All twins participated in a baseline questionnaire. A midterm and a project-end questionnaire and focus groups are planned in 2022.

**Aim:** To introduce the audience to this new twinning project by sharing the project team's experience regarding its implementation as well as present the preliminary results of the baseline questionnaire.

**Methods:** We made use of the General Self-Efficacy Scale to assess the self-efficacy of participating twins before they joined the project (Schwarzer, R et al. 1995). We used a Dutch language version of this scale, that has been used and validated in 23 different countries including the Netherlands. The mid-term and project-end questionnaires will be followed by focus groups using the Most Significant Change (MSC) method to guide the focus group questions.

**Results:** Baseline is still to be analysed and will be made available for the Nordic conference. The mid-term and project-end results will be available in 2023.

**Conclusions:** Earlier results of twinning have indicated that the impact of twinning on the leadership capacity of participating twins is positive, however validated scales were not used to

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assess former twinning projects. We expect that the outcomes of Twinning using the General Self-Efficacy Scale as well as the Most Significant Change theory will give us more tangible as well as validated results. This is important if we want to implement twinning to support midwives to learn reciprocally from each other and grow.

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# POSTER PRESENTATIONS



## P1

# TO KEEP YOUR REGISTRATION AS A MIDWIFE STARTS DURING EDUCATION

*Leonie Welling, RM, MSc, Teacher, Rotterdam University of Applied Sciences, bachelor midwifery, The Netherlands*

**Background:** In the Netherlands midwives have to do to keep their registration as a midwife. The bachelor of midwifery from the Rotterdam created a same system for their students.

**Aim:** Encourage students to start a life of lifelong learning as a midwife. This could be an example for other midwife universities, enhancing students for lifelong learning.

**Methods:** Since 2008 in the curriculum has a register for student for 1 EC per year.

**Results:** Students do four different categories, just as a graduated midwife: 1. Theoretical education; 2. Supervision. 3. Midwifery skills, 4. Rest. Students learn to make choices in what they want to learn beside the curriculum.

**Conclusions:** Students start with lifelong learning as a student. And will continue after graduating. And appreciate to work on their competences. Lifelong learning starts during bachelor education.

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## P2

# STUDENTS CO-CREATE NEW WAYS OF TEACHING ANTENATAL CLASSES

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**Background:** The Danish National Board of Health recommends antenatal classes in smaller groups with the aim of sharing experiences amongst the participants. In Danish hospitals, especially in the Capital Region, antenatal classes often will be lectures in auditoriums with 100-200 participants and the possibility of dialogue between the midwife and the expecting couple is limited. This situation leaves midwifery students with less opportunity to practice modern health pedagogic teaching skills regarding antenatal classes in the clinical part of the education. At Copenhagen University College we have a teacher facilitated but student-led clinic, where students in interprofessional relations can practice and acquire competencies towards becoming innovative, reflective, and creative facilitators in antenatal classes.

**Aim:** To create a safe and innovative learning setting where the students can experiment and co-create new ways of teaching antenatal classes.

**Methods:** We have thoroughly evaluated the students learning outcomes in a mixed methods design, including a survey in 2014, seven focus groups in the period 2011-2017 and ongoing formative assessment. Furthermore, we have evaluations from the participants of the antenatal classes.

**Results:** In the student led clinic we succeed in creating a room for playful learning and an opportunity to try out funny and crazy ideas. The evaluations provide explanations on why and how it encourages the students towards becoming innovative and confident health professionals. Furthermore, the participants states that the antenatal classes to a high extend meets their needs.

**Conclusions:** A teacher facilitated but student-led health clinic offering antenatal classes has proved to be a powerful learning setting for students to develop innovative, highly creative, and reflective competencies and a safe learning environment for the expecting couples.

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P3

## MIDWIVES' EXPERIENCES OF PERFORMING NEWBORN RESUSCITATION

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**Background:** Newborns normally require little help to adapt to extra-uterine life, and very few newborns are in need of advanced resuscitation. Still up to 10% need immediate help to breathe after birth. This immediate ventilation-help is easily achievable as Norwegian midwives are attending most births. Assessing each baby after delivery and performing sufficient help for all newborns is equally important worldwide for all midwives. Little research focus on the role of being a midwife assessing newborn babies in need of resuscitation.

**Aim:** To explore midwives experiences with performing newborn resuscitation in maternity wards.

**Methods:** We conducted a qualitative study, using a phenomenological hermeneutic approach. We used individual interviews with 16 clinical midwives working in Norwegian maternity wards. The interviews were conducted from August 2018 to January 2019.

**Results:** The complexity about how midwives balanced responsibility and vulnerability in newborn resuscitation during "The Golden Minute" was revealed. Midwives described stress when performing resuscitation and needed support and confirmation.

**Conclusions:** The vulnerability and responsibility for mothers and newborns simultaneously influenced midwives in several ways. They needed support and confirmation to be prepared for newborn resuscitation. They further described that a lack of knowledge, skills and experience were barriers to midwives being prepared. Simulation training with tailored programs, are suggested to improve midwives' skills and further to help them feel prepared for real newborn resuscitation. It is important to emphasize midwives' assessment during "The Golden Minute"

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and further investigation from other perspectives are needed to understand fully the midwifery complexity.

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## CONTENT OF A TAILORED NEWBORN RESUSCITATION PROGRAMME FOR MIDWIFERY STUDENTS

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**Background:** Midwives attend most births, and they are responsible for normal pregnancies and births in Norway. Newly graduated midwives often have the entire responsibility for newborn resuscitations. Existing guidelines in newborn resuscitation are not specifically adapted to midwifery profession. Due to infrequent exposure to real newborn resuscitation, training programmes are requested to be tailored to each profession's experiences, to ensure the success in improving midwifery students' skills. It is important to develop a programme to help prepare midwifery students for these demanding resuscitations.

**Aim:** To explore midwives' perceptions about what constitutes necessary content and methods of instruction in a newborn resuscitation programme tailored for midwifery students.

**Methods:** A qualitative study, using an exploratory, interpretive design. We interviewed sixteen midwives with experiences in high-risk and midwifery-led maternity wards.

**Results:** This study emphasizes a significant need for simplified guidelines in newborn resuscitation adapted to the midwifery profession. Innovative methods are necessary when developing a tailored programme in newborn resuscitation and a supportive culture is underpinned as essential when participating in newborn resuscitation.

**Conclusions:** We suggest that all facets of existing guidelines should be considered when creating a newborn resuscitation course tailored to midwifery students. Further research — including development and implementation of a tailored programme in newborn resuscitation in midwifery education — is advised, to help midwifery students prepare for their clinical challenges and everyday tasks.

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## EXPERIENCES OF MIDWIFE MENTORS AND STUDENTS ABOUT PRACTICING IN DEDICATED EDUCATION UNIT IN PREGNANCY AND POSTPARTUM WARDS

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**Background:** The Dedicated Education Unit (DEU) -practice has been developed for midwife students' practical training at Kuopio University Hospital (KUH) in collaboration with Savonia University of Applied Sciences (Savonia UAS). KUH started the DEU -pilot in spring 2020 on Pregnancy and Postpartum wards in partnership with the Project HARKKA at Savonia UAS. The DEU -practice includes 2-4 midwife students, who work together independently according to their daily learning goals under the supervision of a midwife mentor. Students reflect their practicing in a Personal Learning Environment (PLE) –blog.

**Aim:** This study describes midwife mentors' and students' experiences of practicing in the DEU on Pregnancy and Postpartum wards at KUH in Spring and Autumn 2021.

**Method:** Data was collected from midwife mentors with the SurveyPal-questionnaire and 4-year midwife students from their reflections in a PLE-blog and in reflection sessions at KUH. Data was analysed with the content analysis.

**Results:** Students felt that their independence and responsibility increased in the DEU. Professional growth and clinical knowledge strengthened during the practice. Students gave more feedback to their peers and they felt that their reflection skills developed. Mentors thought that they can give more opportunities to students in the DEU to plan and implement care comprehensively. Mentors recognized some challenges, like the continuity of mentoring and evaluation of the students due to the lack of the shifts together.

**Conclusions:** Mentors and students were mostly satisfied with practicing in the DEU at KUH. Learning with peers and support from the mentor when needed were important factors in the DEU. It was suggested to create a systematic student peer-learning approach to the DEU. Overall, students had better acquirements to work independently after a clinical practice in the DEU. In the future, it is important that mentors plan their work shifts so that they will have enough working time with the students.

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## THE PRACTICAL EXAMINATION (BIRTH) AS A SIMULATION? – REQUIREMENTS FOR THE SIMULATION-BASED FINAL EXAMINATION IN GERMAN MIDWIFERY EDUCATION IN CONNECTION WITH THE AMENDMENT OF THE MIDWIFERY ACT

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**Background:** In Germany, the state practical final examination concerning the birth has so far taken place in hospitals. Midwifery students attended a birth on their own and were examined by a midwifery lecturer and a practice mentor. In 2019, the German Midwifery Act was amended. One result of the change is that the exam is now implemented as a simulation using obstetric models and simulation patients. In addition, the location of the exam has been transferred from hospitals to universities. This simulation-based examination is a novelty for the final state examination within the midwifery education in Germany.

**Aim:** The aim of the research project is to determine the requirements midwifery lecturers and mentors place on the practical final state examination (birth) relating to the amendment of the Midwifery Act.

**Methods:** Four focus groups were carried out between June and July 2021 with a total of 24 midwifery lecturers and practice mentors. The data material was transcribed and evaluated by means of qualitative content analysis.

**Results:** Preliminary results indicate that participants have concerns about the realism of simulation-based examination. However, they consider the new exam format to be far fairer, as the exam content is similarly demanding for each exam. For the participants, it is important that the exam rooms are similar to a delivery room and that the midwifery students have practiced in them continuously. In addition, the students need to know the examination criteria before the exam. Practice mentors would like to continue to be involved in the realisation of the exam and would also like to be involved in its conception.

**Conclusion:** The practical state final examination (birth) has a particularly high value for the participating midwives. This high-stakes examination format should be planned at an early stage. Above all, strategies must be developed to ensure realism.

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## KINESIOTAPING IN MIDWIFERY STUDENT EDUCATION

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**Background:** Kinesiotaping is a therapeutic method that affects the blood circulation in a given area of body, helps to relax or stimulate muscles, has an effect on improving lymphatic and blood flow, promotes muscle regeneration, accelerates the healing process, etc.

**Aim:** In this paper we document the kinesiotaping course for midwifery students.

**Methods:** The effect of kinesiotape is used in pregnancy, during and after childbirth, also for some gynaecological and pregnancy problems associated with lymphostasis (lymphotaping).

**Results:** The application of the tape helps pregnant women to relieve muscle tension in the shoulders, neck, lower back and abdominal area. It relieves tension in the calf and affects faulty posture associated with pregnancy changes and weight gain. After childbirth, it helps e.g. with diastasis of the abdominal muscles, healing of the scar after Caesarean section, it can affect the retention of breast milk in the breast, thus helping prevent inflammation.

**Conclusions:** Kinesiotaping skills can help professional midwives to offer women alternative help in coping with the unpleasant problems associated with pregnancy, childbirth and postpartum recovery.

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## THE CHARACTERISTICS IN STUDENT MIDWIVES LEARNING PROCESSES IN CLINICAL PRACTICE – A SYSTEMATIC REVIEW OF QUALITATIVE STUDIES

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**Background:** Becoming a midwife in contemporary educational system is a struggle to integrate different demands, academic as well develop professional competency. The clinical learning takes place in clinics in which midwives along with ordinary care for childbearing women and partners also supervise student midwives in a traditional preceptorship model. The students follow the midwives' roster and work closely in collaboration and are successive seemed to become socialised into the working culture.

**Aim:** To synthesize the evidence by qualitative studies to expand the understanding of the significant characteristics of student midwives' experiences of learning processes in clinical practise.

**Method:** A systematic review according Thomas and Harden was carried out and we searched EMBASE, Web of Science, Psych Info, Medline and Cinahl databases for the past 10 years. The search contested of potentially 166 publications. The material of 16 publications was analysed with a thematic analysis.

**Results:** The analysis revealed two descriptive themes. The first theme; the nurturing relationship characteristics of the midwife as a role model emerged, in which her relational, and ideological standpoint was significance for the student to learn with and from her. The other descriptive theme the predictability in the learning process, outlined the contextual factors, both the organizational aspects of the collaboration university college and the practice arena, as well as the competency in the midwifery collective and culture regarding the capacity in providing feedback as well the feedforward in a timely and appropriate manner. An analytic theme emerged; An educational and working culture enabling nurturing relationship to be developed.

**Conclusion:** A learning culture appears to be the fertile ground in which student midwives thrive in which themselves decide whether (or not) they will be part as a future colleague. We suggest that the culture in which student midwives learn is of significance for a sustainable future workforce.

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## INFORMAL COMMUNICATION – AN UNTAPPED POTENTIAL FOR LEARNING, KNOWLEDGE-SHARING AND THE QUALITY OF CARE IN A DANISH MATERNITY WARD

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**Background:** To facilitate communication and coordination among health care teams, a wide range of different formal communication channels are implemented in Danish hospitals, such as electronic medical records, written procedures, minutes of meetings etc. which aim to facilitate communication and coordination. However, studies from other professions shows that informal information can play a key role and influences decision-making and collaboration. On the basis of these findings, this study looks into informal communication among nurses and midwives in postnatal care.

**Aim:** To identify, study and analyze the role of informal communication for the quality of care in a Danish maternity ward.

**Methods:** An ethnographic fieldwork was carried out over 6 weeks with participant observation, qualitative semi-structured interviews and dialogue meetings with nurses and midwives. The data was analyzed using a thematic analysis and comparative contextualization.

**Results:** The study shows that the informal communication is scarce, but highly professional and centered in a 'hotspot' were the main part of coordination and communication takes place. The nurses and midwives works very independent with their patients and the workplace have a strong culture concerning when and how to communicate. They are also keen on not 'disturbing' their teammates. However, primarily using formal communication the ward misses a potential for learning and knowledge-sharing which can impact the quality of care.

**Conclusion:** Informal communication and workflows are vital for the provision of care in the maternity ward, but neglected as an important mean to impact the quality of care. The study on nurses' and midwives' use of informal communication in their daily work and their reflections on how to communicate, showed that the current organization of the work didn't support the use of informal communication. Without systems that support informal communication necessary for collaboration in healthcare, the department have an untapped potential for development and improving the quality of care.

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## EDUCATIONAL MOBILE APPLICATION FOR PREVENTION OF DOMESTIC VIOLENCE -DOMINO -PROJECT

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**Background:** The reports of domestic violence have increased remarkably during the COVID-19 pandemic. Domestic violence is a broad term, which includes the wide range of violations. It effects on the well-being of the whole family and results serious physical, mental, sexual- and reproductive health problems. Social- and healthcare professionals need more knowledge, skills, and education to identify and intervene in domestic violence.

**Aim:** To provide knowledge and education for current and future social- and healthcare professionals for prevention and early intervention of domestic violence by developing an educational mobile application. Longer term aim is to improve the physical and mental wellbeing and care of victims and perpetrators by improving the early intervention and prevention of domestic violence.

**Methods:** Panel discussions to social-and health care professionals and Higher Educational Institute (HEI) teachers in four countries (Finland, Greece, Portugal, Latvia). Two panel discussions are conducted in each country. One panel discussion is with a total of six participants and two interviewers. The panel discussions take place online, through Microsoft Teams, during autumn 2021. The audio recorded panel discussions are analyzed by thematic content analysis.

**Results:** The pedagogical framework is the base of the educational needs of domestic violence of social- and health care professionals and HEI teachers. DOMINO online course (5 ECTS) is developed on the basis of pedagogical framework. The online course creates the content of the final product of the project, DOMINO mobile application.

**Conclusions:** The DOMINO mobile application is flexible, utilizable and multi-functional tool for social- and healthcare professionals, students and teachers in pandemics or in other altering situations. By enhancing the accessibility of knowledge and education of early intervention and prevention of domestic violence among current and future professionals, the care of victims and perpetrators as well as their physical and mental wellbeing will be improved in the longer time.

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## THE NORDIC NETWORK OF ACADEMIC MIDWIVES NORNAM

*On behalf of NoRNAM:*

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**Background:** NorNAM is a network of researching midwives from five Nordic countries focusing on midwifery models and theories. Midwives and midwifery have been a respected and integrated part of the health care systems in the Nordic countries for the last 300 years. Midwives are the main care giver, assist all spontaneous births and are present at all operative deliveries to provide care for the mother and baby. The Nordic welfare state model is characterised as democratic, capitalist, welfare countries with active social states with a comprehensive responsibility for health, wellbeing and education of the residents. Researchers from the Anglo-Saxon cultural area dominate the field of midwifery, because they are many in numbers, have a long research tradition, and are producing research of high quality. For smaller countries, there is a danger of introducing and implementing thoughts, models and guidelines without taking the local context in consideration. Since professional roles and the organisation of maternity care differs across countries, it is therefore necessary to identify specific regional or national challenges and thus develop theories and models for maternal care, and for midwifery practice.

**Aims of NoRNAM:** To strengthen the profession of midwives and the midwifery approach by focusing theoretical perspectives in practice, education, and research, in the context of the Nordic countries.

**Methods:** Activities like PhD-courses and other courses, publications, and conferences.

**Results:** Up to now we have arranged two PhD-courses "Theories and models for midwifery"

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attended by more than 40 students. We are working with a textbook “Nordic midwifery – theories and models”, including 22 authors from the Nordic countries and published one review on models for midwifery. Current work and future plans will be presented at the conference.

**Conclusions:** NoRNAM conduct activities to strengthen Nordic midwifery by focusing on theoretical perspectives in practice, education and research.

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## RESEARCH METHODS FOR HEALTH PROFESSIONALS

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**Background:** Today, research and development forms an integral part of the Danish curriculum for a bachelor's degree in Midwifery. In addition to qualifying for the independent functioning of the midwife's field of activity, the graduate midwife must be qualified to participate in research and development work, promote and support evidence-based practices and actions that strengthen public health, and be able to continue in theoretical and clinically qualifying continuing training. This calls for new solutions regarding educational material. In Denmark, the market for research methodology textbooks aimed at this target group is still in its infancy.

**Aim:** We wanted to develop a textbook, that should (1) specifically be targeted at health professional students at bachelor's degree level, (2) be written in contemporary direct language, while maintaining a correct theoretical technical language, and (3) cover quantitative as well as qualitative theoretical approaches to science, scientific theory, research ethics, and a section assigned to the dealing with the difficult path from scientific knowledge to clinical practice.

**Methods:** We had an agreement with a Danish textbook publisher. The three authors had different professional backgrounds, but all in health disciplines. The writing process went on for several years at varying intensity levels. All authors must be able to vouch for the whole book.

**Results:** The book was published by August 2021. Hence, at the time of writing the book has not yet been reviewed by peers or tested by students. It includes many illustrative examples from the clinic that the student can relate to.

**Conclusion:** We believe this book fills a gap, and that it will give students an understanding of how research generates new health science knowledge and how research results can be used in working with people. We hope it will sharpen readers' scientific thinking, whichever professional path they may chose after graduation.

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## P13

# GOVERNAL POLICY AND ACTION PLAN TO IMPROVE CHILDBIRTH CARE IN ICELAND

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**Background:** Childbirth care, which is a fairly predictable service process within a few months timeframe, is divided between institutions and three levels of the health service, primary, secondary and tertiary. In some cases, this division is so big that it can be assumed that pregnancy, childbirth and postpartum have little to do with each other. The reality is of course different. By its nature, the health system is complex, with a high degree of specialisation and a large number of service providers. It falls to the authorities, in collaboration and consultation with institutions within the system, to create a holistic system that will ensure seamless services at the appropriate service level.

**Aim:** To improve childbirth care in Iceland.

**Methods:** The Minister of Health commissioned an interdisciplinary working group in 2020 to make recommendations to improve childbirth care services. The group delivered a report and after being published for review on the online government consultation, an action plan was made to accomplish the recommendations. The action plan was published in September 2021.

**Results:** The Icelandic childbirth care is of rather good quality but can be improved in various areas; increasing the integration of the service, improving and equalizing access to various aspects of it, ensuring the education and training of professionals and ensuring that women have a choice of services. These propositions fit well with the policy for Iceland's health services, that was published in 2019.

**Conclusions:** The overview of the services and collaboration between organizations is of tremendous importance and support for professionals, which increases professionalism and access to essential services, thereby enhancing the safety of women and children.

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# SUCCESSFUL IMPLEMENTATION OF THE STUDY RESULTS 'MIDWIFERY CARE in HESSE'

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**Background:** There is only little and less convincing information about the nationwide – Community midwifery care by midwives in Germany. Because of this lack of information, the Hessian Ministry of Social Affairs and Integration commissioned the study "Midwifery Care in

Hesse". Along with the German Hospital Institute (DKI) and University of Applied Sciences (HS Gesundheit), the study consisting of eight modules (including a midwifery and a mother survey) was conducted from 01.11.2018 to 30.09.2019.

**Aim:** The goal is to derive final recommendations for action to improve the overall situation of midwifery care in Hesse. Hereby results of the demand analyses, the surveys, by involving all decision-makers at the self-administration and the regional level of care units and representatives of midwives and parents' initiatives play a vital role.

**Method:** Within this study the range of midwifery services and their fields of activities were documented. Based on this status quo survey, a follow-up (workshops with experts) with corresponding recommendations for action is to be derived as an essential success factor. Participants of the workshops are midwives, members of parent initiatives, Hessian midwives association, politicians, doctors, health insurances and Association of Statutory Health Insurance Physicians.

**Results:** Based on the relevant aspects of the study results, the moderated workshops gave the participants the chance to express their opinion about the current situation. The following topics were developed and discussed: 1. Measures against the shortage of midwives; 2. Expanding training capacities; 3. Attractive working conditions for midwives; 4. Capacity planning in the area of midwifery care.

**Conclusion:** As a consequence of the results, recommendations for action to improve the overall situation of midwifery care in Hesse were derived. Research in partnership with stakeholders, will help to convert and to implement the results of the study into the daily practice.

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## AGENCIES FOR INDEPENDENT MIDWIVES IN GERMANY

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**Background:** In Germany, every woman has a legal right to get midwifery care from start of pregnancy until the end of the lactation period. Women usually have to get in contact with a midwife on their own. Nevertheless, it seems to be increasingly difficult to find an available independent midwife for the care out of hospital. For this reason, agencies for midwives were founded with the goal to simplify getting in contact with midwives and to facilitate independent midwives with their work organization processes through organized placement.

**Aim:** The objective is to evaluate the success of the agencies in two cities in the federal state of North Rhine-Westphalia/Germany and the effects for cooperating midwives.

**Method:** A formative and summative evaluation was performed. The cooperating midwives (n=139) were interviewed within a retrospective and explorative survey. In addition, 324 resp. 2.225 placement requests from January until August 2018 have been analyzed. The evaluation was carried out with SPSS® software (Version 24); processes of descriptive as well as inference statistics have been used.

**Results:** The placement rate for the first midwifery agency is 86.77% (n=269). There is no relation between the point of time for the request and the placement rate. The placement rate for the second agency is 56.63% (n=1.260). The chance for women, who contacted the agency during pregnancy is significantly higher than when contacting it after childbirth (p=0.012).

81.8% of the midwives have stated that free capacities were quickly allocated by the agencies. So they got a better occupancy rate. This increase of efficiency leads to the result that 14.3% of the respondents were able to take care of more women than usual.

**Conclusion:** Agencies for midwives can be a key factor to enhance the work of independent midwives.

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## IMPLEMENTING OFFERS OF MIDWIFERY CARE WITHIN A MEDICAL CARE CENTRE IN MONHEIM (GERMANY)

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**Background:** The small town Monheim am Rhein places a strong focus on using preventive measures to create optimal future opportunities for children and adolescents, resulting in a steady influx of young families in recent years. This affects, among other things, the regional needs in medical and especially obstetric care. Simultaneously, the shortage of midwives in Monheim needs to be addressed. Not every woman has access to the full range of care offers. The city of Monheim would like to support local and interprofessional obstetric care and is planning to integrate midwifery services into the municipal structures as part of a medical care center and to support the development of adapted concepts.

**Aim:** The professional offers in the obstetric context, including of midwives, should be conceptually designed in such a way that the participation of as many groups of people in the basic care as possible is ensured. Additionally, regionally established supply concepts and an interdisciplinary perspective must be considered and promoted.

**Methods:** The obstetric and supply structures in Monheim are recorded on the basis of an as-is analysis. With information from midwives, gynecologists and other actors involved within the social and health care system, a concept for the implementation of regional midwifery care is being developed.

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**Results:** In Monheim, all pregnant women and young families should be given low-threshold access to all obstetric services, including midwifery services. Local structures are to be used for this and integrated into the interdisciplinary concepts.

**Conclusions:** Local and low-threshold offers by midwives within a medical care center can, additionally to improving the health situation of pregnant women and young mothers, lead to the formation of communal prevention chains and help compensating the existing shortage of midwives.

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## **PRIMARY CARE: PERINATAL CARE WITHIN THE CENTRE OF ANTWERP**

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**Background:** In Flanders, a reorganization of care in primary care zones was carried out by the government. Pre- and postnatal care was underrepresented in this reorganization. As a primary care provider, the midwife has an autonomous medical competence within perinatal care. The presence of midwives within a primary care zone is therefore logical, although they themselves have to join voluntarily as a professional group.

**Aim:** To study the best way to organize perinatal care within the new structure of the perinatal care zones in the city of Antwerp. Also what is the most efficient structure that unites, supports and organizes the midwife within a primary care zone. Important insights, developed from projects within pre and postnatal care, are taken into account.

**Methods:** A qualitative study using inductive content analysis was conducted. Data were collected through 30 individual face-to-face in depth interviews with new parents (n=13) and intramural and extramural caregivers, such as midwives, psychologist, gynecologists and pediatricians (n=17). In a first phase, data were analyzed within each group separately (parents and healthcare providers). In a second phase findings from both groups were compared and used as the basis for a Delphi study.

**Results:** The themes that emerged from the data demonstrated congruent experiences between the group of the parents and the health care providers. Currently, a Delphi-study with health care providers is ongoing to examine how the primary perinatal care in multidisciplinary setting should be structured and integrated.

**Conclusions:** The Delphi-study results should give a suggestion for organizing multidisciplinary care in the perinatal period. Midwives are a key person for primary perinatal care. The suggestion for organizing multidisciplinary care is an impetus for further development of the primary care zones.

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## ASPECTS OF MIDWIFE-LED CARE FROM A EUROPEAN VIEW

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**Background:** In Germany, a shortage of midwives is suspected in public debates, and the availability of midwives at the primary care level is not guaranteed. On the other hand, in the Netherlands, Scotland and Norway, there does not appear to be a shortage of midwives in existing primary care units.

**Aim:** To generate past, present and future salutogenetic aspects of midwife-led care from a European perspective, in the Netherlands, Scotland and Norway.

**Method:** A qualitative study based on data from three expert interviews with proven scientists, evaluation based on qualitative content analysis according to Mayring.

**Results:** Compared to medical-led care, according to respondents, the benefits for healthy women and their children under midwife-led care, outweigh any negatives. Important salutogenetic aspects of country-specific health systems were gained and compared, including political and financial characteristics, job profiles and midwife status, cooperation between the different care models, and qualitative information and networking.

**Conclusions:** Although no specific in-depth knowledge of midwife-led care was obtained in the Netherlands, Scotland and Norway, salutogenetic aspects of midwife-led care could none the less be generated in the Netherlands, Scotland and Norway, which could again shed light on findings at the primary care level.

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## DEGREE OF PREGNANCY PLANNING AND RECOMMENDED PREGNANCY PLANNING BEHAVIOR AMONG WOMEN WITH AND WITHOUT CHRONIC MEDICAL CONDITIONS – A LARGE HOSPITAL-BASED CROSS-SECTIONAL STUDY

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**Background:** Pregnancy planning allows women to engage in pregnancy planning behaviors to optimize health status in the preconception period. Women with chronic medical conditions have a higher risk for adverse pregnancy outcomes, and therefore preconception care is recommended. The aim was to compare pregnancy planning among women with and without chronic medical conditions and to assess adherence to the recommended pregnancy planning behaviors on folic acid intake, physical activity, and abstention from smoking and alcohol among women with and without chronic medical conditions stratified by pregnancy planning.

**Methods:** A cross-sectional study with data from 28,794 pregnancies. Pregnancy planning was measured with the Swedish Pregnancy Planning Scale. Multiple Poisson regression with robust variance estimates was used to assess the associations between chronic medical condition (yes/no and main categories) and pregnancy planning, and chronic medical condition status and pregnancy planning behaviors stratified by pregnancy planning.

**Results:** 74% reported a high degree of pregnancy planning in the study population, and 22% had one or more chronic medical conditions. We found no overall association between chronic medical conditions and pregnancy planning (aRR 1.00, 95% CI 0.98-1.01). However, women with type 2 diabetes and mental illness were significantly less likely to plan their pregnancies than women without these conditions (aRR 0.73, 95% CI 0.61-0.88, and aRR 0.91 95% CI 0.87-0.96, respectively). Women with chronic medical conditions were more likely to adhere to the recommended planning behaviors; intake of folic acid, abstention from alcohol before pregnancy, and no binge drinking in early pregnancy.

**Conclusions:** Overall, pregnancies were highly planned. Women with chronic medical conditions did not show a higher degree of pregnancy planning than women without chronic medical conditions but were, however, more likely to adhere to the generally recommended pregnancy planning behaviors (i.e., intake of folic acid and abstention from alcohol intake). Only women with mental illness and type 2 diabetes reported a lower degree of pregnancy planning. It is crucial that we continuously address pregnancy planning and planning behaviors for women with and without chronic medical conditions, especially women with type 2 diabetes and mental illness.

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## NINTH-GRADE SCHOOL ACHIEVEMENT IN DANISH CHILDREN CONCEIVED FOLLOWING FERTILITY TREATMENT: A POPULATION-BASED COHORT STUDY

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**Background:** Infertility is a growing public health problem in Denmark. Children conceived following fertility treatment have an increased risk of poor perinatal outcome, somatic diseases and mental disorders compared to children conceived spontaneously. The area of cognitive development and IQ is less studied and needs further and larger studies.

**Aim:** To assess whether academic achievement among children conceived following fertility treatment is different from that of children born to fertile women while also considering the underlying infertility.

**Methods:** A population-based cohort study. The study population consisted of all 154,536 firstborn, live-born, singleton children in Denmark between 1995 and 2000 who completed their ninth grade with an examination. The Danish Infertility Cohort was used to identify children conceived after fertility treatment (n=10,099), and information on mean school marks was obtained from Statistics Denmark.

**Results:** After adjustment for potential confounders, the overall mean marks were statistically significantly lower for children conceived after the various fertility treatment procedures (e.g., any fertility treatment: MD -0.13; 95% CI -0.18, -0.08) compared with children born to fertile women. No difference was observed (aOR 1.15; 95% CI 0.89, 1.49) for not passing the ninth-grade examination. When children born to women requiring fertility assistance but without fertility treatment in the index pregnancy were used as a reference group, no differences in the adjusted overall mean marks and the likelihood of not passing the ninth grade with an examination were observed.

**Conclusion:** Our findings indicate that fertility treatment per se is not associated with lower school marks and the likelihood of not passing the ninth grade with an examination. Hence, we suggest that factors related to both fertility problems and cognitive development may more likely explain the slightly lower academic performance (i.e., modest lower mean marks) among children conceived after fertility treatment.

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## WHAT IF I'VE WAITED TOO LONG? REFLECTIONS ON TIMING OF MOTHERHOOD USING ONLINE FOCUS GROUPS ON SOCIAL MEDIA WITH DANISH WOMEN OF REPRODUCTIVE AGE.

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**Background:** The age of Danish women having their first child when being at advanced maternal age (35+) constitutes approximately 12% of all births in Denmark. Postponing motherhood is seen in other Nordic and Western countries too. Social media provide new possibilities within health research. With Facebook being the largest social network in the world, it constitutes a potential platform for recruitment and data collection from women of reproductive age.

**Aim:** The aim of this study was to explore the reflections on timing of motherhood among Danish women of reproductive age, and to explore the challenges and opportunities of using Facebook as a setting for qualitative health research.

**Methods:** A qualitative study based on 3 online focus groups on Facebook with 26 Danish women of reproductive age discussing timing of motherhood.

**Results:** We identified three main themes: 'Life before parenthood', 'To plan for a child' and

'A life without children'. Several external and internal conditions was considered important regarding to timing of motherhood. Women tend to compare their reproductive capacity to their female relatives, and the social norms surrounding motherhood to female friends and colleagues. Women without children experienced a pressure regarding when to have children, which was perceived as either positive or negative. Being part of an online focus group was considered a positive experience, and more than half of the participants found it advantageous to meet online instead of meeting face-to-face.

**Conclusions:** Women strive to fulfil several external and internal conditions before pursuing motherhood. Danish women compare their reproductive capacity to female relatives, and the social norms surrounding motherhood to female friends. Conducting online focus groups on Facebook is a suitable method to access qualitative data from women of reproductive age and have the potential to give women of reproductive age a voice in the debate of motherhood.

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## ASSESSMENT QUALITY OF LIFE OF INFERTILE COUPLES: MALE AND FEMALE APPROACH

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**Background:** Infertility is a unique medical condition because it is related to a couple rather than a single person. Health related quality of life has now been considered as a main tool for outcome measurement in infertility. Infertility can cause depression, anxiety, social isolation and sexual dysfunction. To prevent negative consequences for couples, it is important to assess the quality of life of both partners who face the problem of infertility.

**Aim:** To assess quality of life of infertile couples.

**Methods:** A descriptive, cross-sectional study design was applied. The study was conducted in 2019 November – 2020 February, at the Reproductive medicine center in the University hospital in Lithuania. The main outcome measure was the FertiQoL tool. The scale is divided into two parts: a core module and an optional treatment module.

**Results:** Analysis of the data revealed that men have a statistically significant better emotional quality of life related to infertility than women. Women are more likely to feel drained or worn out due to infertility problems than men ( $p < 0.001$ ). Women are more likely than men to have feelings of jealousy and resentment about not being able to have children ( $p = 0.035$ ). Also women were more likely to experience grief and/or feelings of loss than men ( $p = 0.005$ ). It is clear from the obtained results that mood swings due to infertility between hope and despair are more common in women ( $p = 0.008$ ). The data show that men tend to rate their health slightly better than women.

**Conclusions:** Comparing quality of life related to infertility between male and female, male's quality of life was rated higher than female's quality of life in all evaluated areas. Negative



emotions arising from infertility are the most important part of the infertility-related deterioration in quality of life for both of patients.

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## PRECONCEPTION LEISURE-TIME PHYSICAL ACTIVITY AND FAMILY HISTORY OF STROKE AND MYOCARDIAL INFARCTION RELATE TO PRETERM DELIVERY: RESULTS FROM A NORWEGIAN COHORT

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**Background:** Preterm birth poses health consequences for mothers and offspring, including cardiovascular disease sequelae. Identifying at-risk pregnancies to ensure appropriate level of care is important. However, studies are lacking evaluating family history of cardiovascular disease and modifiable risk factors, such as physical activity, as they relate prospectively to risk of delivering preterm.

**Aims:** To evaluate whether preconception past-year weekly leisure-time physical activity or a family history of stroke or of myocardial infarction prior to age 60 years in first degree relatives associated, prospectively, with preterm delivery.

**Methods:** Baseline data from Cohort of Norway (1994–2003) health surveys were linked to the Medical Birth Registry of Norway for identification of all subsequent births (1994–2012). Log-binomial regression models provided relative risks (RR) and 95% confidence intervals (CI) for preterm delivery (<37 weeks gestation); multinomial logistic regression provided odds ratios (OR) for early (<34 weeks gestation) and late preterm (≥34 <37 weeks gestation) relative to term deliveries.

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**Results:** Mean (SD) length of time from baseline health survey participation to delivery was 5.6 (3.5) years. A family history of stroke associated with a 62% greater risk for late preterm deliveries (OR 1.62; CI 1.07–2.47), while a family history of myocardial infarction associated with a 66% greater risk of early preterm deliveries (OR 1.66; CI 1.11–2.49). Sensitivity analyses gave similar results. Preconception vigorous physical activity  $\geq$ three hours per week relative to <one hour per week associated with increased risk of early preterm delivery (OR 1.52; 95% CI 1.01–2.30). Light physical activity  $\geq$ three hours per week relative to less activity was not associated with preterm deliveries overall.

**Conclusions:** Results suggest that family history of cardiovascular disease may help identify women at risk for preterm delivery. Further, research is needed regarding preconception and very early pregnancy physical activity and associated risks and benefits are warranted.

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## ACCESIBLE REPRODUCTIVE HEALTH CARE FOR YOUTH IN RURAL AREAS OF NORWAY – HEALTH CARE PROVIDERS PERSPECTIVES

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**Background:** Health care service for youth aged up to 20 years are free of charge. One of the aims are to provide counselling regarding issues in family planning and to provide accessible and safe contraceptives. These services are a mandatory service for the local municipality often organized accordance to the health care centre in the community. Midwives, public health nurses and doctors run these services and can administer insertion of IUD and implants, prescribe oral contraceptives as well tests for sexual transmitted infections. You can usually turn up without an appointment.

**Aim:** To explore health care personnel's experiences on providing accessible reproductive health care services in rural area in southern Norway.

**Methods:** Qualitative interviews with 5 female nurses was performed. Malterud text condensation was used for analysis which revealed to main themes and five subthemes.

**Results:** The first theme, experiences of barriers were shortage of competent personnel, poor attendance at the office and difficulties in guarantee anonymity in this service due to the transparency in the local context. The other theme, the nurse's adjustments of the service according the premises of the youth; being accessible and extending the office hours, providing contraceptives at the local school and being present at digital arenas to get in touch and introduce the service for the youth.

**Conclusions:** The service organized according the national guidelines seem not to fit the premises of the youths in rural areas in southern Norway. Nurses develop local strategies adjust the service according the premises of the rural youth population, by means having opening hours at the school arena as well being more virtually present on the digital arena. Organisation for

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these services need to be more aligned and attuned to the rural youth population it is supposed to serve for example by digital consultations.

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## PERINATAL OUTCOMES OF FREQUENT ATTENDANCE IN MIDWIFERY CARE IN THE NETHERLANDS

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**Background:** Over the last decade, a trend towards high utilisation of primary maternity care was observed in high-income countries. FA leads to a more increased workload and pressure on the healthcare system and does not improve health outcomes per se. There is limited research with contradictory results regarding frequent attendance (FA) and perinatal outcomes in midwifery care.

**Aim:** To examine possible associations between FA in midwifery care and obstetric interventions and perinatal outcomes.

**Methods:** We performed a retrospective cohort study in a midwifery-led care practice in an urban region in the Netherlands. FA was categorised using the Kotelchuck-Index Revised. Logistic, nominal, and linear regression models for perinatal outcomes were fitted as appropriate to assess the association with FA, stratified by antenatal referral to an obstetrician.

**Results:** The study included 1015 women, 239 (24%) FAs and 776 (76%) non-FAs; 538 (53%) were not referred, and 447 (47%) were referred to an obstetrician. In the non-referred group, FA was significantly associated with a requirement for pain relief and duration of dilatation. In the referred group, FA was significantly associated with induction of labour, ruptured perineum and getting an episiotomy. In the non-referred and the referred groups, FA was not associated with mode of delivery, birth weight, haemorrhage, duration of dilatation and period of expulsion.

**Conclusion:** Our novel findings elucidate how relatively common perinatal outcomes differ by FA and antenatal referral to an obstetrician. Further research in a larger setting is recommended to include rare adverse outcomes such as suboptimal Apgar score and mortality. Furthermore, the underlying mechanism of FA needs to be investigated to deter the overuse of prenatal care and improve perinatal outcomes for both FAs and non-FAs.

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## RISK OF STILLBIRTH AND PRETERM BIRTH AMONG UNDOCUMENTED, PREGNANT MIGRANTS IN DENMARK: A RETROSPECTIVE CASE-CONTROL STUDY

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**Background:** Undocumented, pregnant migrants in Denmark comprise a vulnerable group at risk of experiencing adverse birth outcomes due to adverse health determinants and lack of access to antenatal care. Considering their vulnerable situation and the limited research focusing on undocumented, pregnant migrants in Denmark, the aim of the present study is to examine the association between being an undocumented, pregnant migrant and the risk of experiencing stillbirth or pre/post-term birth.

**Methods:** A retrospective case-control study was performed including undocumented, pregnant migrant women and women with a Danish CPR-number giving birth at the seven largest labour wards in Denmark in the period of 2011.01.01–2018.12.31. A total of 882 undocumented, pregnant migrants and 3,528 controls were included in the study. Logistic regression models were used to estimate the undocumented, pregnant migrants' risk of experiencing stillbirth as well as a preterm birth, when comparing with the control group.

**Result:** Of the undocumented, pregnant migrants 33.3% were EU citizens, 16.2% were applicants for residence, and 50.5% had unknown basis for residence. Mean age of the undocumented, pregnant migrants was 28.4 years, while mean age of individuals in the control group was 30.9 years. Higher adjusted odds of experiencing stillbirth and preterm birth were observed among undocumented, pregnant migrants, as compared with the control group (AOR 3.50; 95% CI 1.31–9.38 and AOR 1.41; 95% CI 1.04–1.93, respectively). The basis of residence was not associated with higher odds of experiencing stillbirth and preterm birth.

**Conclusion:** The results show a higher risk of stillbirth and preterm birth among the undocumented, pregnant migrants. These findings suggest a need for increasing focus on antenatal care among population groups without access, such as the undocumented, pregnant migrants.

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## ASSOCIATIONS BETWEEN MATERNAL AGE AND SOCIOECONOMIC STATUS WITH SMOKING DURING THE SECOND AND THIRD TRIMESTERS OF PREGNANCY: A REGISTER-BASED STUDY OF 932 671 WOMEN IN FINLAND FROM 2000 TO 2015

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**Background:** The trend and pattern of smoking during pregnancy have been evaluated, but few studies have examined how socioeconomic status modifies the association between maternal age and smoking.

**Aims:** To explore the association between maternal age and smoking during the second and third trimesters of pregnancy across socioeconomic groups and to evaluate the interacting effect of maternal age and socioeconomic status on smoking with a view to informing public health interventions.

**Methods:** Data for this register-based study were sourced from the Finnish Medical Birth Register and Statistics Finland, using the information of 932 671 women from 2000 to 2015. We used multivariable regression models to assess the association between maternal age and smoking across socioeconomic groups. We further assessed interactions on both multiplicative and additive scales.

**Results:** Using women 30 to 34 years as the reference group, adjusted ORs (aOR) and 95% CIs for smoking were 6.02 (5.81 to 6.24) in women below 20 years and 2.77 (2.71 to 2.84) in women 20 to 24 years. The prevalence of smoking across socioeconomic groups compared with upper-level employees increased, peaking for women in manual occupations (aOR 3.39, 95% CI 3.25 to 3.52) and unemployed women (aOR 4.49, 95% CI 4.30 to 4.68). Significant interactions on the additive scale with the relative excess risk due to interaction  $>2$  were found for unemployed women aged 25 to 29 years and for teenage mothers and mothers aged 20 to 24 years across all socioeconomic groups, but not for self-employed women.

**Conclusions:** The association between maternal age and smoking differed by socioeconomic status for young mothers. Interventions should address a wider range of maternal risk factors among young mothers with low socioeconomic status and simultaneously target a broader number of women who smoke during pregnancy.

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## DEVELOPING AND TESTING MODIFIED MINDFETALNESS TO IMPROVE PREGNANCY OUTCOMES FOR WOMEN BORN IN SOMALIA WHO GIVE BIRTH IN SWEDEN

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**Background:** Women who have migrated to western industrialized countries have a higher risk of adverse pregnancy outcomes than nationals. In Sweden, stillbirth is more common among Somali-born women, and they are more likely to give birth to a baby with poorer health, compared to women of Swedish origin. Maternal perception of decreased fetal movements is associated with negative birth outcomes, and Somali-born women seek care due to decreased fetal movements to a lower extent than Swedish-born women. Previous studies have shown improved pregnancy outcomes for women who were introduced to the Mindfetalness method. To practice Mindfetalness the women are instructed to lie down on the side for 15 minutes per day when the baby is awake and monitor the character, strength, and frequency of the fetal movements. A research project running from 2021–2025 on Mindfetalness will be presented.

**Aim:** This project is aiming at retrieving knowledge that can be used to improve pregnancy outcomes for Somali-born women giving birth in Sweden.

**Methods:** The research team will conduct interviews with Somali-born women in their third trimester about their experiences of fetal movements and their attitudes to Mindfetalness. Based on the data retrieved from these interviews, a modified Mindfetalness will be implemented in maternity clinics and the pregnancy outcomes evaluated in a before-and-after study.

**Results:** Identifying factors that inhibit Somali-born women from monitoring fetal movements or seeking care when decreased fetal movements occur, this project will a) raise the awareness about Somali-born women at risk of adverse pregnancy outcomes b) provide an evidence-based method for monitoring fetal movements adjusted specifically to support for Somali-born women c) support healthcare professionals to overcome cultural and linguistic difficulties when giving information about fetal movements.

**Conclusions:** As key professionals caring for childbearing women, midwives play an important role in eliminating racial inequalities in maternity health care.

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## LIFESTYLE HABITS AMONG PREGNANT WOMEN IN DENMARK DURING THE FIRST COVID-19 LOCKDOWN COMPARED WITH A HISTORICAL PERIOD – A HOSPITAL-BASED CROSS-SECTIONAL STUDY

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**Background:** The first national lockdown in Denmark due to the COVID-19 pandemic was declared on March 11, 2020. From this date, national restrictions were imposed.

**Aim:** To assess the potential influence of this first nationwide lockdown on exercise, alcohol consumption, and smoking in early pregnancy.

**Methods:** Using a cross-sectional study based on routinely collected patient-reported data, we compared the lifestyle habits of women who were pregnant during the first phase of the pandemic (COVID-19 group) (n=685) with those of women who were pregnant the year before (Historical group) (n=787).

**Results:** We found a reduction in any exercise (PR=0.91, 95% CI (0.84 to 0.99)), in adherence to national recommendations of exercise (PR=0.89, 95% CI (0.80 to 0.99)), in cycling (15% vs. 28%, p<0.0001), and swimming (0.3% vs. 3%, p=0.0002) in the COVID-19 group compared with the Historical group. The prevalence of binge drinking was reduced in the COVID-19 group compared with the Historical group (PR=0.80, 95% CI (0.68 to 0.93)). In contrast, the prevalence of any weekly alcohol consumption and smoking cessation during pregnancy was similar between groups.

**Conclusions:** Our findings indicate that national restrictions due to the COVID-19 pandemic influenced the lifestyle habits of pregnant women and should be addressed in antenatal counseling.

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## MIDWIVES PROVISION OF HEALTH PROMOTION IN ANTENATAL CARE: A QUALITATIVE STUDY

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**Background:** Antenatal care to support and improve maternal health is a core midwifery activity, where prevention as well as health promotion and woman-centeredness are important. Antenatal care in Denmark remains largely unexplored. How midwives perform health promotion is also not known. Studies indicate that health promotion in antenatal care can be improved. Moreover, a schism seems to exist between health promotion and prevention in antenatal care.

**Aim:** To explore how Danish midwives experienced antenatal care and practiced health promotion.

**Methods:** Midwives undertaking antenatal care were interviewed individually (n=8) and two focus groups (n=10) were created. Thematic analysis was performed inductively and the theoretical models from Piper's health promotion practice Framework for midwives were used to analyse the midwives' health promotion approach.

**Findings:** Two major themes were highlighted. Theme 1: 'Midwives' experiences of antenatal care` described factors contributing to quality in antenatal care, such as improving midwifery skills and building relationships with the pregnant women. Theme 2: 'Health promotion in antenatal care` described both midwife-focused and woman-focused approaches to pregnant women's health. Barriers to high-quality antenatal care and a holistic health promotion approach were identified, such as shared-care issues, documentation demands and lack of time.

**Conclusion:** A personal relationship with pregnant women is important for high-quality antenatal care and for health promotion within this context. Continuity in care and carer is experienced to be a significant premise for establishing a personal relationship. Midwives mainly used a midwife-focused approach. To further promote women's health, midwives need to focus on a woman-focused approach. Why midwives work using a midwife-centred approach has many explanations, but midwives need to learn and help each other understand how they can practice woman-focused care while simultaneously providing prophylactic, evidence-based care. This calls for organizational backing.

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## ADULT DAUGHTERS OF ALCOHOLIC PARENTS – A QUALITATIVE STUDY OF THESE WOMEN’S PREGNANCY EXPERIENCES AND THE IMPLICATIONS FOR ANTENATAL CARE PROVISION

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**Background:** Adult children of alcoholic parents are at increased risk of having health problems, compared to those of non-alcoholic parents. Yet, little is known about how growing up with alcoholic parents affects these women’s experiences when pregnant.

**Aim:** To explore how adverse childhood experiences related to parental alcohol abuse affected women during their pregnancy and assess the implications of women’s experiences for antenatal care provision.

**Methods:** Twelve in-depth interviews were performed with women, who had been brought up by an alcoholic mother and/or father. Systematic text condensation was used to analyse data.

**Results:** Two main categories were identified. First, ‘Establishing relationships’, which described how women’s upbringing affected relationships with their parents, friends, and partner. Secondly, ‘Responding to the pregnancy and attending antenatal care’, which illuminated how neither care providers nor women talked about women’s childhood experiences at the antenatal visits, and illustrated women’s concerns about the baby’s health, lack of predictability and control during the pregnancy period, as well as motherhood abilities following birth.

**Conclusions:** Strained relationships with their parents and a limited number of friends meant that women primarily relied on their partner for practical and emotional support during the pregnancy. Women’s childhood experiences had great influence on how they responded to being pregnant. However, conditions related to their upbringing were not addressed at the antenatal visits.

Implications for practice include systematic screening for adverse childhood experiences upon entry in antenatal care. Furthermore, post-graduate training of antenatal care providers in how to establish trust and communicate with these women may be needed. Antenatal preparation classes can serve as important sources of informational as well as social support. Finally, as women’s emotional vulnerabilities are likely to continue after birth, parenting courses may help these women in establishing healthy parenting models, despite their traumatic childhood experiences.

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## CHILD PROTECTION MEASURES AROUND BIRTH: AN EVIDENCE BASED PROTOCOL

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**Background:** Most child abuse occurs amongst young children: 0-3 year old's are twice as likely to be abused than older children. Prenatal conditions can be a contributive fetal risk, requiring protective measures during pregnancy or directly after birth. A pregnancy with a supervision order or an out-of-home placement at birth, is traumatic for women and their families. These situations also have a major impact on midwives, obstetricians and paediatricians, sometimes to such an extent that they no longer want to report or be involved in future child abuse cases.

**Aim:** To improve collaboration amongst professionals involved in perinatal child protection measures.

**Methods:** Using empirical action-oriented research, an existing hospital protocol was evaluated. Interviews were held with professionals and women who experienced perinatal child protection measures. A quick-scan was carried out among Dutch maternity service organisations. Based on results, the protocol was re-written. Prospective cases were followed using the renewed protocol. Field experiences were used to further improve the protocol and to support implementation.

**Results:** Interviews with professionals showed a strong wish to extend the protocol to primary care health services, including midwives and family doctors and frustration with regional policy differences. Other important emerging themes were 'follow-up care', 'evaluation' and 'prevention'. The quick-scan showed that few maternity service organisations have a protocol regarding this subject. Care is dependent on 'knights in shining armour'.

**Conclusions:** Although prevention was thought to be important by all professionals involved, project limitations prevented the inclusion of this topic. Specific attention in the protocol was given to follow-up care of women who experience perinatal child protection measures. Collaboration with primary health care professionals (midwives and family doctors) was included. The range of the protocol was extended to include all regional hospitals, ensuring balanced regional policy. The renewed protocol will serve as national example in the Netherlands.

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## FACTORS INFLUENCING PATIENT EDUCATION IN PRENATAL SHARED MEDICAL APPOINTMENTS

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**Background:** Since the introduction of the CenteringPregnancy program in the early 1990s, prenatal shared medical appointments (SMA's) has become more common in many countries. In this program, 8-12 pregnant women with approximately the same gestational age, gather in nine sessions from about 120 minutes for prenatal care and education. During the sessions, health care providers (midwives and gynecologists, assisted by other health care providers as social workers, dietitians, nurses) perform the medical examinations, but they also provide education about pregnancy, childbirth, postpartum period, parenthood and related themes. The aim of this theme-based education is to empower participants and their partners and to encourage them to make healthy choices during pregnancy and the rest of their lives. As SMA's are a relatively new model of prenatal care, few research has been performed about the factors that influence the transfer and acquaintance of knowledge for both health care providers and participants.

**Aim:** We wanted to investigate which factors influence patient education in SMA's not only in prenatal care, but also in other domains.

**Methods:** An integrative literature review with a systematic search was carried out. Key concepts of the Social Cognitive Theory (SCT) and Social Constructivism related to group education were used as a priori themes. After detailed analysis of the included studies, we deduced subthemes.

**Results:** We included 22 studies about patient education in shared medical appointments in prenatal care and in other domains. We found that the factors feeling of bonding, humour, feeling of safety, access to information, time, relationship participants-staff, modelling and self-regulation play an important role in SMA's. Furthermore, we found that health care providers function both as leaders and as peers within the group.

**Conclusions:** We found eight factors that influence the transfer and acquaintance of knowledge within SMA's. Health care providers should take these factors into account in patient education.

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## HOW PREGNANT WOMEN MOVE WHEN PRESCRIBED ACTIVITY RESTRICTIONS DUE TO THREATENED PRETERM DELIVERY – A DESCRIPTIVE, MULTICENTRE STUDY

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**Background:** For decades physical activity restrictions have been prescribed in pregnancies with threatened preterm delivery. The level of physical (in)activity as well as effects of the restrictions are however unknown.

**Aim:** To examine the objective level of physical (in)activity in pregnant women prescribed activity restrictions due to threatened preterm delivery compared to uncomplicated pregnant women without restrictions.

**Methods:** A descriptive study performed between February 2019 and October 2020 at three Danish hospitals. Singleton pregnancies between 22-33 gestational weeks were included if prescribed activity restrictions due to threatened preterm delivery or with uncomplicated pregnancies without restrictions. For seven days, participants wore two accelerometric SENS® monitors attached to chest and thigh, respectively. Accelerometric data consisted of step counts and number of minutes in five different body positions. At inclusion demographic and obstetric variables were collected. Preliminary descriptive data are presented here.

**Preliminary results:** 72 pregnant women were included; 16(22%) as inpatients, 13(18%) outpatients and 12(16%) were combined in-/outpatients, all prescribed activity restrictions. Thirty-one (43%) were uncomplicated without restrictions.

Among 22 participants (31%) with prescribed strict restrictions the supine/lateral rest lasted 17.7 (9.6–24.0) (median (min-max)) hours/day; sitting upright 4.9 (0.1–11.7) hours/day; and standing upright 0.4 (0.1–1.1) hours/day. Step counts during strict restrictions were 1,520 (20–5,482) steps/day.

Among 11 participants (15%) prescribed moderate restrictions the supine/lateral rest lasted 15.1 (11.5–21.6) hours/day; sitting upright between 5.6 (2.0–9.3) hours/day and standing upright between 1.3 (0.3–2.4) hours/day. Step counts during moderate restriction were 3,310 (467–6,968) steps/day.

Among 31 participants (43%) prescribed no restrictions the supine/lateral rest lasted 10.5 (6.3–15.4) hours/day; sitting upright between 7.6 (0.1–11.4) hours/day and standing upright between

2.2 (1.0–3.9) hours/day. Step counts during no activity restriction were 9,235 (3,225–20,818) steps/day.

**Preliminary conclusion:** Participants performed strict, moderate or no activity restrictions with great variation in how long time they spent in the different body positions.

Elaborated results and conclusion are to be presented at NJF Congress in Helsinki 2022.

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## WHAT ARE THE MAIN REASONS FOR SUBOPTIMAL IODINE INTAKE OF PREGNANT WOMEN IN ICELAND?

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**Background:** Iodine plays an important role during pregnancy for normal growth, development, and the metabolism of the foetus. Iodine deficiency was recently observed for the first time in Iceland, among pregnant women, most likely due to lower fish and dairy consumption when compared to previous studies.

**Aim:** The aim of the study was to examine why pregnant women do not consume food items that are important sources of iodine. The purpose of the study was to support midwives informative role in prenatal care.

**Method:** This was a quantitative cross-sectional study. Pregnant women (n=100), answered a questionnaire through a telephone interview, on consumption of fish, dairy and supplements containing iodine. The results were compared with the Food Based Dietary Guidelines (FBDG) from the Directorate of Health.

**Findings:** The percentage of women claiming they never consume dairy was 13% and only 27% consumed two or more portions a day, which is in line with the FBDG. Various explanations were given for not following the guidelines on dairy consumption, e.g. 14% of the women said they did not like dairy, but 24% gave no specific reason. The percentage of women who said they never consume fish was 9% and only 27% consume fish two or more times a week, which is in line with the FBDG. Various reasons were given for not following the guidelines on fish consumption but 10% of the women do not like fish while 18% gave no reason. Only 7% of women took supplements containing iodine.

**Conclusions:** The findings suggest that there are several different reasons for low consumption of food items rich in iodine and use of dietary supplements containing iodine is uncommon. It is important to provide women with information on the significance of food rich in iodine in prenatal care.

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## HOW DO REMINDER SYSTEMS IN FOLLOW-UP SCREENING FOR WOMEN WITH PREVIOUS GESTATIONAL DIABETES WORK?

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**Background:** Women with previous gestational diabetes have an increased risk of developing type 2 diabetes later in life. Recommendations therefore urge these women to participate in follow-up screening, 4–12 weeks postpartum and every 1–3 years thereafter.

**Aim:** To theorize how reminder interventions to support early detection of diabetes work, for whom, and in what circumstances.

**Methods:** We used a method informed by realist review and synthesis. A systematic, iterative search in six electronic databases (PubMed, MEDLINE Ovid, The Cochrane Library, CINAHL, EMBASE) had a primary focus on experimental intervention studies and included additional information in relation to identified intervention studies. Analysis inductively identified context-mechanism-outcome configurations present in the evidence.

**Results:** We located 16 articles eligible for inclusion. A cross-case comparison identified seven grouped context-mechanism outcome configurations leading to intervention mechanisms relating to changes in women's reasoning and behavior. Configurations were thematically ordered in relation to Systems Resources, Women's Circumstances, and Continuity of Care. These were mapped onto a socio-ecological model and discussed according to identified middle-range theories.

**Conclusions:** Our findings add to the body of evidence, that reminders have the potential to be effective in increasing participation in the recommended follow-up screening. Our study may assist researchers and policy and decision makers to analyze and judge if reminders are feasible and/or likely to succeed in their specific context. Further research into the perspective of socially disadvantaged and overweight women is needed to avoid unintended consequences such as social inequality in service use and stigmatization in future programs.

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## THE EXPERIENCE OF PROVIDED INFORMATION AND CARE DURING PREGNANCY AND POSTPARTUM WHEN DIAGNOSED WITH PREECLAMPSIA – A QUALITATIVE STUDY

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**Background:** Preeclampsia (PE) is one of the leading causes of both fetal and maternal morbidity and mortality. Despite PE being one of the most severe obstetrical complications there is only scant research describing women's experiences of PE and care.

**Aim:** To explore women's experience during pregnancy and the postpartum period regarding the provided information and care concerning preeclampsia.

**Method:** A qualitative study was designed. Semi-structured face-to-face interviews were performed with fifteen women who were diagnosed with PE and included at two maternity units located in Southern Sweden. The material was analyzed using content analysis, based on Graneheim and Lundman.

**Results:** Suffering from PE were understood as stressful illustrated in four main themes: *fragmented information, lack of care planning, separation postpartum and overall stress and worry*, based from ten sub-themes.

**Conclusions:** The women experienced fragmented obstetrical care and information deficit when diagnosed with PE. Our findings indicate a need of additional support and professional guidance due to increased stress, worry and a despair of being separated from the newborn. Future research investigating specific care-planning and postpartum follow-up are suggested as steps to improve care for women with a pregnancy complicated by PE.

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## BABY STEPS: USING INTERVENTION MAPPING TO DEVELOP A SUSTAINABLE PERINATAL PHYSICAL ACTIVITY HEALTHCARE INTERVENTION

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**Background:** While the benefits of physical activity (PA) during and after pregnancy have been established, many women do not reach the recommended PA levels during this time. A major barrier found in the literature is a lack of counselling by healthcare providers (HCPs), which is partly caused by the limited knowledge on the topic.

**Aim:** The aim of this study was to develop an intervention to improve the promotion of PA by HCPs.

**Methods:** We used Intervention Mapping (IM), a theory-based framework to develop an intervention, called “Baby steps”, in a high-income (Austria) and a low-to middle-income country (South Africa). We applied the following IM steps: (1) A needs assessment to determine the barriers and enablers of PA promotion by HCPs, including a scoping literature review and community needs assessments (qualitative interviews, questionnaires, and focus groups with midwives, obstetricians, and community health workers) to determine the desired outcomes of the intervention. (2) Performance and change objectives were formulated, describing the behaviors that need to change for the intervention to succeed. (3) Based on these objectives, theory-based behavior change techniques were selected, and practical applications were developed. (4) The applications were combined into two evidence-based interventions tailored to each country’s needs. Step (5) and (6) consist of an implementation and evaluation plan, respectively.

**Results:** The intervention is aimed at HCPs, such as midwives and community health workers, consisting of a two-day training course, including practical resources. Combining didactic and interactive education, it addresses both PA knowledge and the skills needed to transfer knowledge and facilitate behavior change.

**Conclusions:** We used Intervention Mapping to develop an intervention for HCPs to improve PA promotion during and after pregnancy. In future, the intervention’s effect on women’s activity levels during and after pregnancy needs to be studied.

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## REDUCTION OF GRADE III AND IV PERINEAL TEARS UTILISING MIDWIFERY SKILLS -A DEVELOPMENT PROJECT

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**Background:** Obstetric anal sphincter injuries (OASIS) can have negative implications for women’s life such as anal incontinence and perineal pain. In the Nordic countries the incidence of OASIS is 1,2–4%. Whereas, in Finland, the rate has been approximately 1,2% and at the Labor Ward of the Espoo Hospital the incidence of OASIS has been 2,3–2.4% in 2019–2020.



**Aim:** The primary aim of this development project was to reduce the incidence of OASIS in Labor Ward of Espoo Hospital to less than 2%. Sub-aims were to increase midwives' awareness of perineal tears and identify factors related to OASIS in the Labor Ward of Espoo Hospital.

**Method:** Firstly, a literature review was conducted to summarize research evidence of OASIS. Secondly, factors associated with OASIS in the Labor Ward of the Espoo Hospital were explored. The data (153 OASIS reports) was analyzed statistically with SPSS.

**Results:** No explanatory factors for OASIS were found. Based on the literature review and data analyse a poster "Risk assesment for grade III and IV perineal tears" and newsletters for midwives about perineal care during delivery were developed. The incidence of OASIS in the Labor Ward of Espoo Hospital after this development project will be reported at the conference.

**Conclusions:** One explanatory factor for high OASIS rates at Labor Ward of the Espoo Hospital could be the practice of the ward, where most perineal tears extending towards anus are examined by both midwife and gynecologist - so no OASIS would be missed.

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## WHERE IS THE TOILET? A GROUNDED THEORY STUDY INTO THE COMPLEXITY OF THE OASIS SYNDROME

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**Background:** Despite decreasing prevalence of obstetric anal sphincter injury (OASIS) over the past 15 years, about 2.6% of all vaginal births in Sweden were complicated by damage to the anal sphincter muscle. About 25% of the affected women report persisting problems one year postpartum. Studies indicate that women have problems related to pain, incontinence, defecation problems, vaginal prolapse and sexual dysfunction after OASIS. The negative aspects regarding anal incontinence related to OASIS have recently been summarized to 'OASIS syndrome', a hidden women's condition with emotional, social, and psychological consequences. Further, conflicting results of the possible impact of OASIS on women's quality of life are presented. Moreover, whether OASIS impacts women's work ability or not has not been previously studied.

**Aim:** To explore women's experiences of living and working with long-term maternal morbidity after an obstetric anal sphincter injury 1.5 years until five years postpartum.

**Methods:** Individual interviews were carried out with 11 women living with long-term morbidity after OASIS. This study applies a grounded theory approach according to Charmaz and data analysis is ongoing at the moment.

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**Results:** Preliminary results point towards a complex picture regarding long-term maternal morbidity after OASIS. The living and working situation are affected in multiple ways by a number of factors leading to physical, emotional, social and economic consequences. Not only the woman herself is affected but also her family, friends, employer, and colleagues. Detailed results will be presented at the conference in May 2022.

**Conclusions:** The prior defined OASIS syndrome seems to not only apply to anal incontinence but also to other long-term consequences affecting both daily life and working life.

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## PRACTICE, SKILLS AND EXPERIENCE WITH THE PINARD STETHOSCOPE FOR INTRAPARTUM FOETAL MONITORING

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**Background:** In most high-income countries, the cardiotocography and handheld Doppler device have replaced the Pinard stethoscope for intrapartum foetal monitoring. As a result, the skills required to use the Pinard are rapidly disappearing from midwifery.

**Aim:** The aim of this study was to explore the practice, skills and experience of Norwegian midwives who still regularly use the Pinard in their current practice in a variety of birth settings, and those who used the Pinard in the era prior to the introduction of the CTG.

**Methods:** A qualitative descriptive design based on focus group interviews and one individual interview, with 21 midwives. Reflexive thematic analysis captured common patterns across the data.

**Results:** The analysis resulted in four main themes describing practice, experience, skills and context. As the study is not published yet, the results are not presented in the abstract. At the conference, the results will be presented and described.

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## INTRAPARTUM SYNTHETIC OXYTOCIN, BEHAVIORAL AND EMOTIONAL PROBLEMS IN CHILDREN, AND THE ROLE OF POSTNATAL DEPRESSIVE SYMPTOMS, POSTNATAL ANXIETY AND MOTHER-TO-INFANT BONDING: A DUTCH PROSPECTIVE COHORT STUDY

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**Background:** Although widely used, intrapartum synthetic oxytocin could interfere with child development.

**Aim:** To examine the association between intrapartum synthetic oxytocin and child behavioral and emotional problems and to assess if maternal depressive or anxious symptoms or mother-to-infant bonding play a role in this association.

**Methods:** A prospective population-based cohort study was carried out. Pregnant women in their first trimester of pregnancy visiting a total of 109 primary and nine secondary obstetric care centers in the Netherlands were invited to participate.

Intrapartum synthetic oxytocin exposure status was based on medical birth records and was defined as its administration (Yes/No). Child behavioral and emotional problems were measured with the Child Behavior Checklist at up to 60 months postpartum. Maternal depressive symptoms, anxiety and mother-to infant bonding were measured with the Edinburgh Postnatal Depression Scale, State Trait Anxiety Inventory and the Mother-to-Infant Bonding Scale from 6 months postpartum. We used multivariable linear regression models to estimate standardized beta coefficients and unique variance explained.

**Results:** 1,528 women responded. In total 607 women received intrapartum synthetic oxytocin. Intrapartum synthetic oxytocin administration was not associated with child behavioral and emotional problems, mother-to-infant bonding nor with postnatal anxiety. Intrapartum synthetic oxytocin was however significantly but weakly associated with more postnatal

depressive symptoms ( $\beta=0.17$ , 95%CI of 0.03 to 0.30) explaining 0.6% of unique variance. Maternal postnatal depressive symptoms, postnatal anxiety symptoms and suboptimal mother-to-infant bonding were positively associated with child behavioral and emotional problems.

**Conclusions:** We found no evidence that intrapartum synthetic oxytocin is associated with child behavioral and emotional problems, mother-to-infant bonding, or with postnatal anxiety symptoms. However, intrapartum synthetic oxytocin was positively but weakly associated with postnatal depressive symptoms. The clinical relevance of this finding is negligible in the general population, but unknown in a population with a high risk of depression.

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## NAVIGATING WITH A CULTURAL COMPASS - MIDWIVES' EXPERIENCES OF COOPERATING WITH MULTICULTURAL DOULAS

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**Background:** The concept of multicultural doulas is relatively new in Norwegian healthcare and still in the founding-stage. Caring for immigrant women has become an important part of Norwegian midwives' work-reality and learning about their experiences from cooperating with multicultural doulas might help other midwives in the same position and could even paint a more holistic picture regarding research connected to multicultural doulas in Norway.

**Aim:** To describe Norwegian midwives' experiences of cooperating with multicultural doulas during birth.

**Methods:** Qualitative method. Seven individual semi-structured interviews were conducted with midwives who had cooperated with a multicultural doula during birth, in both University and regional hospitals. The data was analysed following the stepwise-deductive inductive method, SDI.

**Results:** The results are presented through a theory; *navigating with a cultural compass*, and four concepts: *a voyage to clarify roles, the cultural compass' continuous knowledge, a cultural compass to steer towards a safer birth and beyond and open attitudes aboard the same ship*. The multicultural doula is described as a cultural compass that can be useful for midwives and for a safer birth, but can also be a hindrance if the roles are not clarified. Two approaches to clarifying roles were identified; using intuition and through a coordinating conversation.

**Conclusion:** Cooperation with multicultural doulas can be helpful for midwives by improving the communication with the birthing immigrant woman, and the process of birth is positively affected. However, it can also be challenging if the roles are not clarified which could lead to conflict of interest. Key to a positive experience of the cooperation are open attitudes.

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## MATERNAL CHARACTERISTICS ASSOCIATED WITH LABOR DYSTOCIA IN NULLIPAROUS WOMEN. A SYSTEMATIC REVIEW.

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**Background:** Labour dystocia is a common obstetric complication among nulliparous women and is the leading cause for intrapartum caesarean section. Despite the frequency of the complication and the potential implications knowledge about aetiology and associated factors is sparse.

**Aim:** We performed a systematic review of interventions and observational studies to identify maternal characteristics associated with labour dystocia in nulliparous women.

**Methods:** The databases MEDLINE, Embase, and CINAHL were searched for relevant studies published from January 2000 to June 2021. Using criteria predefined in our protocol (PROSPERO ID: CRD42020212248), we scanned titles and abstracts using COVIDENCE software. The eligible study population was limited to low-risk nulliparous women in spontaneous labour at term from OECD countries. Two authors independently screened title and abstract, extracted data and assessed risk of bias using the Newcastle-Ottawa Scale. Disagreement was resolved through discussion leading to consensus.

**Results:** A total of 10,030 records were reviewed, hereof eight studies were included in the systematic review (N=82,354). It was not possible to perform meta-analyses due to heterogeneity, but results from studies that investigated risk factors with sufficiently homogeneous definitions and populations were presented in forest plots. The overall certainty of the evidence was moderate to high. Three studies found that maternal age was associated with a significantly higher risk of labour dystocia. A further three studies found that a high pre-pregnancy BMI also was associated with an increased risk. In addition, short stature, fear of giving birth, and caffeine intake were associated with an increased risk of dystocia, while maternal physical activity was associated with a decreased risk. Maternal psychosocial characteristics such as social network and history of violence were not associated with the risk of labour dystocia.

**Conclusion:** The main risk factors during pregnancy for labour dystocia include advanced maternal age, overweight, short stature and fear of childbirth.

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## DEVELOPMENT OF AND EXPERIENCES WITH AN INFORMATIONAL WEBSITE ON EARLY LABOR: A QUALITATIVE USER INVOLVEMENT STUDY

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**Background:** The period of painful uterine contractions prior to five cm of cervical dilatation is often referred to as “early labor” or the “latent phase”. For some women, early labour is short, while for others it may continue for hours or even days, and many find it challenging to prepare for and cope with this phase of labor. Easily accessed web-based information from reliable sources may be useful in this preparation.

**Aim:** To describe the development of a Norwegian website for people seeking information on early labor, and to explore users’ experiences with the website to increase user-friendliness.

**Methods:** A website (Latens.no) was developed using an iterative process involving a multidisciplinary research team, health personnel, users, a graphic designer, and an expert in software development. We explored user-friendliness using semi-structured individual interviews and the think aloud method, and all interviews were audio-recorded and transcribed. Participants’ feedback on the website was thematically analyzed.

**Results:** Participants were women who were pregnant with their first baby (n=4), women (n=2) who had recently given birth to their first baby, and partners (n=2). Results from participants’ experiences completing tasks include positive feedback related to both the content and design of Latens.no, and suggestions for improvement. The participants expressed a desire to find information about early labour on the internet. In addition, they found the information on Latens.no relevant, easy to read, and trustworthy, and the design attractive and easy to use. Overall, participants performed the tasks easily, with few clicks and minimal effort.

**Conclusions:** The use of the think aloud method while performing tasks allowed for thorough feedback. Participants both provided information enabling improvement, but at the same time confirmed the user-friendliness of the Latens.no. We expect that changes made based on this study will further increase the usability and acceptability of the website. The article presenting the study has been accepted for publication in JMIR Formative Research.

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## REGIONAL PRACTICE VARIATION IN INDUCTION OF LABOR IN THE NETHERLANDS: DOES IT MATTER?

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**Background:** In this retrospective population-based cohort study, we focus on practice variation in induction of labor (IOL) in maternity care networks in the Netherlands (VSVs). VSVs are collaborations of a local hospital and its surrounding community midwifery practices, which are jointly responsible for providing high-quality maternity care in the region.

**Aim:** To describe practice variation in IOL rates in the Netherlands and to investigate whether this variation is associated with maternal and neonatal outcomes.

**Methods:** We included records of 184422 nulliparous women with a term singleton vertex birth (NTSV) from the years 2016-2018, available in the Dutch perinatal database Perined. We calculated IOL rates in the NTSV group for all 77 VSVs. After case mix correction we divided the VSVs in IOL rate categories: lowest quartile (Q1), moderate (Q2-3) and highest quartile (Q4). We explored the association of these categories with unplanned caesarean section (CS), unfavorable maternal outcomes (non-spontaneous birth, PPH, anal sphincter lesions) and adverse neonatal outcomes (low Apgar score, NICU admission, perinatal mortality) using descriptive statistics and multilevel logistic regression analysis.

**Results:** Within the 77 VSVs the observed IOL rate in the NTSV group ranged from 14.3% to 41.1% (Mean 24.4%, SD 5.3%). Women in Q1 less often had an unplanned CS than in Q4 (10.2% vs 12.8%). Unfavorable maternal outcomes were less prevalent in Q1 than in Q4 (33.8% vs 36.3%). Adverse neonatal outcomes were less prevalent in Q1 than in Q4 (1.0% vs 1.3%). In the multilevel analysis, only the association between a low IOL rate and unplanned CS remained significant (OR 0.829;  $p = .008$ )

**Conclusions:** High practice variation in IOL deserves close attention. Our study suggests that low IOL rates may reduce unplanned CS in the NTSV group, without impact on neonatal outcomes. It is important to explore the mechanisms that contribute to practice variation.

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## BIRTH POSITIONS AMONG WOMEN WHO GAVE BIRTH IN ICELAND DURING 2012–2018: A POPULATION-BASED COHORT STUDY

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**Background:** Birth positions can affect the progress of childbirth and women's birth experience. Many factors affect birth positions, e.g. birth culture, a woman's age and parity.

**Aim:** To explore birth positions among women in Iceland and relationship with women's characteristics and place of birth.

**Methods:** This population-based cohort study, includes women who gave birth vaginally to a single child in a vertex position, without instrumental assistance, during 2012-2018, a total of 16 064 births. Birth positions were defined as supine and upright. Supine position included lying on the side, semi-recumbent, semi-recumbent with feet in the steps, lithostomy and lying on the back. Upright positions included a birthing chair, on knees, on all fours and a standing position. Chi-square and Fisher's exact tests were used to compare the prevalence of birth positions based on women's characteristics and their place of birth.

**Results:** The majority of women (91.0%) gave birth in a supine birth position. The semi-recumbent position had the highest prevalence (58.7%), then lying on their back (12.9%). The most common upright position was on all fours (5.8%), with higher prevalence among parous women and women > 39 years old ( $p < .001$ ). Women with citizenship from the lowest group of Human Development Index (HDI) score ( $< 0.900$ ) had higher prevalence of giving birth in a supine position, compared to Icelandic women and women without epidural (91.9 and 96.2% vs. 90.8% and (97% vs. 87.1%) ( $p < .001$ ). Also, women who gave birth in a tertiary hospital setting had higher prevalence of giving birth in a supine position, compared to a primary hospital setting (91.6% vs 63.9%) ( $p < .001$ ).

**Conclusion:** The majority of women in Iceland give birth in supine position. There is a relationship between some characteristics among women and birth positions. Further research is needed on what affects the decision on women's birth position.

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## DESIGN OF THE BIRTH ENVIRONMENT AND IT'S EFFECT ON THE BIRTH PROCESS: A PILOT STUDY OF BUDSET IN ICELAND.

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**Background:** The design of a birth environment can support the birth process in a positive way. Today, many birth rooms are equipped and designed in a way which makes the available medical technology clearly visible to the woman in labour and sometimes the only thing she sees in her immediate surroundings. Midwives are in a key position to improve the birth environment through simple actions allowing it to better support a normal birth.

**Purpose:** Pre-test the BUDSET, a birth unit design spatial evaluation tool, in Iceland, additionally to interviewing midwives to explore their experiences of the birth environment.

**Method:** The methodology was inspired by ethnography, and applied methods were field observations followed by interviews with midwives at four birth places.

**Results:** BUDSET is well suited for assessing birth environments in Iceland. According to the tool, the birth environments supported normal birth to varying degrees (65.5 - 80 points out of a possible 100). In the interviews, a key theme emerged "the impact of the birth environment" with two sub-themes: 1) All sorts of birth environments exist. This highlights the diversity that exists in the birth environment – both factors that support the normal process and factors that inhibit. 2) The role of the midwife. Midwives consider their presence in the birth environment important and a tool in itself. They often have the opportunity to rearrange things in the birth room. The sub-themes that emerged from the content analysis were nine.

**Conclusions:** BUDSET can be used to examine further the birth environments in Iceland. This pre-test highlights that birth the environment can be improved sometimes with simple solutions. There are indications that midwives play an important role in creating and optimising the birth environment according to the needs of each individual woman to increase the likelihood that she will give birth normally.

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## WHAT IS RISK IN LABOUR? – PRELIMINARY RESULTS OF FOCUS GROUP DISCUSSIONS WITH MIDWIVES AND OBSTETRICIANS

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**Background:** Risk perception plays an important role in decision-making processes in general in everyday life and also in the area of childbirth. Even though there are known medical risk factors, little is known about what midwives and obstetricians actually perceive as risky while taking care of women giving birth. We conducted focus group discussions with midwives and obstetricians to discuss risk in general when taking care of women giving birth, as well as when and how risky situations occur in the delivery room.

**Aim:** To get insights about what midwives and obstetricians understand by risk in labor in a clinical setting, and which situations are perceived as risky intrapartum.

**Methods:** Four focus group discussions with 24 midwives and obstetricians in total were carried out in 2019 using an interview guide. The discussions were audio recorded and transcribed afterwards. Data was analyzed using thematic analysis. Ethical approval was granted from the ethics committee of the Hochschule für Gesundheit- University of Applied Sciences.

**Results:** Participants described various situations as risky. Different dimensions, i.g. the 'individual perception of the obstetric health professional' and the adhering to an either social or medical model respectively might influence this assessment. In addition, the dimensions 'dyad of the obstetric health professional & the woman', the sense of belonging to a (competent) team and the institution the obstetric health professional works in, might also influence the risk perception.

**Conclusions:** For midwives and obstetricians risk is not just a medically defined term. In fact, the perception of a situation as risky is influenced by external and internal factors and differs between the health care professionals and context. Risk situations are complex constructs with different forms and factors thus midwives and obstetricians need to be aware of the (external and internal) context against which they assess a situation as risk while providing care during childbirth.

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## "CONGRATULATIONS, I AM SORRY FOR YOUR LOSS". A QUALITATIVE STUDY TO HELP HEALTHCARE PROVIDERS SEARCH FOR WORDS WHEN A BABY DIES.

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**Background:** All care providers within mother and child care are confronted, at some point in their career, with the care for parents who (will) lose or have lost a baby. Obtaining the correct attitude and communicating well during these difficult moments are aspects that many healthcare providers continue to struggle with. Parents still encounter well-intentioned but inappropriate communication from healthcare providers.

**Aim:** To study how communication, both verbal and non-verbal, around the death of a baby during pregnancy, birth or in the first ten days postnatal was experienced by parents and healthcare providers.

**Methods:** A qualitative study using grounded theory principles was conducted. Data were collected through 22 individual face-to-face in depth interviews with parents who had lost a baby (n=12) and intramural caregivers, such as midwives, nurses, gynecologists and neonatologists (n=10). In a first phase, data were analyzed within each group separately (parents and healthcare providers) and in a second phase findings from both groups were compared and analyzed according to meta-synthesis principles.

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**Results:** The themes that emerged from the data demonstrated congruent experiences between the group of the parents and the health care providers. Both strengths and weaknesses in current care were named and suggestions for appropriate communication were formulated.

**Conclusion:** Since most health care providers only occasionally care for parents with a deceased baby, a communication tool can optimize communication between healthcare professionals and parents who lose a baby. This is very important as the words which are said at this difficult period last a lifetime in the heads of parents.

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## BODY AND EMBODIMENT OF BIRTHING WOMEN

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**Background:** The influence of the circumstances surrounding labour and childbirth on future physical development of the child is quite well documented. However there is a persistent insufficiency in information and understanding of women's experiences at childbirth. More than ever women have the courage to talk about other emotions and experiences at childbirth than those associated with pain. They speak about disrespectful behaviour and even violence from health professionals, but also about experiences that are close to ecstatic joy.

**Aim:** To analyse relations between circumstances of childbirth and birthcare and women's bodily experience during labour.

**Methods:** I will analyse 30+ interviews using Q methodology which combines qualitative and quantitative research methods, enabling me to interconnect actions, experiences and motives of participants, and how they think about their birth experience.

**Results:** The contents of the interviews focused on women's perceiving of labouring bodies, their lived experience in the moment of childbirth. The process of childbirth is central not only to biology, but also to sociology or anthropology. It causes changes both on physical and psychical level, as well as on social level. It leads us to the question of who has the right to decide on and is responsible for the pregnant or birthing body? How is a woman's new "I" constructed through the experience of childbirth and the intense experience of the body, and thus, if the body is always cultural, how does culture and society affect it?

**Conclusions:** Circumstances in which women give birth are pivotal to how they experience the process of childbirth. Research using Q methodology brings information about connecting the lived experience of women, their embodiment and subjectivity, real situations in the delivery room and acting of people attending birthing women. In the context of Czech maternity care this research is unique and rare and exposes blind spots of the Czech healthcare system.

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## THE IMPLEMENTATION OF THE MOYO FETAL HEART RATE MONITOR IN DISTRICT HOSPITALS IN BIHAR, INDIA – A FEASIBILITY STUDY

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**Background:** Globally, half of all stillbirths occur during birth. Detection of fetal distress with Fetal Heart Rate Monitoring (FHRM), followed by appropriate and timely management, might reduce fresh stillbirths and neonatal morbidity.

**Aim:** To investigate the barriers and facilitators for the implementation of Moyo FHRM use in Bihar state, and secondarily, the feasibility of collecting reliable obstetric and neonatal outcome data to assess the effect of implementation.

**Methods:** CARE Bihar and the hospital management at 4 DHs in Bihar state, each with 6 500–15 000 deliveries a year, agreed to testing the implementation of Moyo FHRM through a process of meetings, training sessions, and collecting data. At each hospital, a clinical training expert was trained to train others, while a clinical assessment facilitator collected data. Observational notes were taken at all training sessions and meetings. Individual interviews (n=4) were conducted with clinical training experts (CTEs) on training experiences and barriers and facilitators for Moyo FHRM implementation. The CTEs recoded field notes in diaries. Descriptive analyses performed on pre- and post-implementation data (N=521) assessed quality and completeness.

**Results:** Main barriers to implementation of Moyo FHRM were health system and cultural challenges involving 1) existing practices, 2) insufficient human resources, 3) action delays, and 4) cultural and local challenges. Another barrier was insufficient involvement of doctors. Facilitators for implementation were easy use of the Moyo FHRM device and adequate training for staff.

**Conclusion:** Health system and cultural challenges are a major constraint to Moyo FHRM implementation in low-resource settings. Improvements at all levels of infrastructure, practices, and skills will be critical in busy DHs in Bihar. Full-scale implementation needs doctor-led leadership and ownership. Obstetric data collection for the purpose of scientific analysis needs to be improved.

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## CESAREAN BIRTH, OBSTETRIC EMERGENCIES, AND ADVERSE NEONATAL OUTCOMES IN ICELAND DURING A PERIOD OF INCREASING LABOR INDUCTION

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**Background:** The rate of labor induction has risen steeply throughout the world. This project aimed to estimate changes in the rates of adverse maternal and neonatal outcomes in Iceland between 1997 and 2018, and to assess whether the changes can be explained by an increased rate of labor induction.

**Methods:** Singleton live births, occurring between 1997 and 2018, that did not start by prelabor cesarean, were identified from the Icelandic Medical Birth Register (n=85 971). Rates of intrapartum cesarean birth (CB), obstetric emergencies, and neonatal outcomes were calculated, and adjusted risk ratios (aRRs) and 95% confidence intervals (CIs) were estimated with log-binomial regression (reference: 1997–2001). Adjustments were made for: (a) maternal characteristics, and (b) labor induction and gestational age.

**Results:** The rate of labor induction increased from 13.6% in the period 1997–2001 to 28.1% in the period 2014–2018. The rate of intrapartum CB decreased between the periods of 1997–2001 and 2014–2018 for both primiparous (aRR 0.76, 95% CI: 0.69 to 0.84) and multiparous women (aRR 0.55, 95% CI: 0.49 to 0.63). The rate of obstetric emergencies and adverse neonatal outcomes also decreased between these time periods. Adjusting for labor induction did not attenuate these associations.

**Conclusions:** The rates of adverse maternal outcomes and adverse neonatal outcomes decreased over the study period. However, there was no evidence that this decrease could be explained by the increased rate of labor induction.

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## TWIN BIRTH RATES AND OBSTETRIC INTERVENTIONS IN ICELAND: A NATIONWIDE STUDY FROM 1997–2018

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**Background:** Twin births are associated with increased risk of morbidity and mortality for mother and child and are more likely to require obstetrical interventions. Increasing twin birth rates among wealthier nations led to regulation changes in the early 2000s that limited multiple embryo transfers. Limited multiple embryo transfers have been associated with reductions in twin birth rates. We aimed to study the affect of the Icelandic regulation changes that were implemented in 2009.

**Material and methods:** The study included all twin births ( $n=3210$ ) during 1997-2018 identified from the population-based Icelandic Medical Birth Register. We calculated yearly twin birth rates and compared the likelihood of twin birth by time period and maternal age using logistical regression analysis adjusted for confounders. Rates of elective and emergency cesarean section, induction of labor (IOL) and instrumental birth were calculated and the risk of each obstetrical intervention for twin births was estimated by time period using logistic regression analysis adjusted for confounders.

**Results:** An observed decrease in the twin birth rate trend was most notable from 2006 until 2009. The likelihood of twin birth decreased in 2009–2013 (AOR=0.76, 95% CI=0.69–0.84) compared to 1997–2002 and was further decreased for maternal age 35+ (AOR=0.58, 95% CI=0.48–0.69). Induction of labor rates increased from 25% in 1997-2002 to 55% in 2009-2013 (AOR=4.25, 95% CI=3.40–5.33) whereas elective (AOR=0.62, 95% CI=0.48–0.80) and emergency (AOR=0.81, 95% CI=0.64–1.01) caesarean section rates declined.

**Conclusions:** Twin births decreased during the study period. The results indicate that international embryo transfer regulations published before the Icelandic regulations in 2009 may have affected multiple birth rates in Iceland. Induction of labor rates increased while caesarean section rates decreased.

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## CHILDBIRTH DISCUSSION – METHOD TO EMPOWER CHILDBIRTH EXPERIENCE

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**Background:** A positive childbirth experience is of immense importance to the recovery from childbirth, to early interaction with the newborn and to her possible pregnancies and deliveries in the future. A childbirth discussion regarding the delivery process should be held with every single parturient. The parturient would be able to share her experiences, ask questions and be heard. Childbirth discussion gives an easy and simple way to empower mothers through highlighting mother's success and support the decisions made during delivery.

**Aim:** The aim of the study was to define factors related to empowering mother through childbirth discussion.

**Method:** The data were collected using qualitative questionnaire for midwives (N=8) and analyzed using inductive content analysis.

**Results:** Empowering childbirth discussion factors were divided into three categories: 1. mother orientation, 2. organizational structure and 3. midwives' professionalism. The discussion should proceed on the mother's terms, her feelings should be heard, questions answered. At the same time the midwife can emphasize the mother's success. The organizational structure can define certain elements for discussion such as timing and time, place and whether the midwife conducting the discussion is from delivery or maternity ward. The midwife's professionalism and experience facilitate the discussion. Understanding the course of childbirth makes it easier for the midwife to discuss events occurred during childbirth. Experience also protects midwives mentally in difficult discussions.

**Conclusion:** A good childbirth discussion leads to empowerment. Every mother should have the right to have a childbirth discussion. Through discussion it is possible to support every mother's self-confidence as well as faith in the future. Childbirth is a unique event and it effects a woman's life in many ways. It is important to empower every mother and family after childbirth. The childbirth discussion also benefits the midwife. It is a good opportunity for the midwives to get feedback.

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## MATERNAL SATISFACTION WITH INTRAPARTUM CARE IN THREE FINNISH CENTRAL HOSPITALS

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**Background:** Maternal satisfaction with intrapartum care is one indicator of the quality of maternity care.

**Aim:** To describe maternal satisfaction with intrapartum care in three Finnish central hospitals.

**Methods:** The data was collected between December 2019 and February 2020 with the MatSatC (Maternal Satisfaction with Intrapartum Care) instrument which is a self-administered

questionnaire including a 5-point scale (1="I am not satisfied at all"; 5="I am totally satisfied"). The sample comprised 231 postpartum women. The response rate was 51%. The data was analyzed using statistical methods.

**Results:** Out of all respondents, 26% were primiparas and 74% were multiparas. Their age varied between 19–44 years. The respondents indicated high satisfaction (including combined options "I am totally satisfied" and "I am partly satisfied") with intrapartum care on all measured dimensions of empowerment, which were bio-physiological (Mean 4.53), functional (Mean 4.51), cognitive (Mean 4.59), social (Mean 4.77), experiential (Mean 4.57), and ethical (Mean 4.71) dimension. However, of the single original questions included in the different sum variables formed according to the dimensions, the mothers were not quite so satisfied with the amount of information given about pain management methods, their opportunities to influence the choices regarding pain control, and maintaining their sense of control. Satisfaction on the cognitive dimension was associated with the way the labour had started ( $p=0.031$ ), satisfaction on the experiential dimension was associated with becoming acquainted with the hospital websites during pregnancy ( $p=0.012$ ), and satisfaction on the ethical dimension was associated with problems with the pregnancy itself ( $p=0.036$ ).

**Conclusions:** From the participating women's client satisfaction perspective, they quality of the intrapartum care was good. However, topics for development efforts in birthing units and further research were also found. The study results can be used in professional and continuing education, in orientation programs, and in managerial work of maternity units.

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## MATERNAL SATISFACTION WITH INTRAPARTUM CARE IN A FINNISH UNIVERSITY HOSPITAL

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**Background:** Research evidence on maternal satisfaction with intrapartum care in Finnish hospitals is needed to serve as one indicator of the quality of care.

**Aim:** To describe maternal satisfaction with intrapartum care in one Finnish university hospital.

**Methods:** The data was collected between June – August 2020 with the MatSatIC (Maternal Satisfaction with Intrapartum Care) instrument which is a self-administered questionnaire including a 5-point scale (1="I am not satisfied at all"; 5="I am totally satisfied"). The sample comprised 401 postpartum women (Response rate 80%). Statistical analysis methods were employed.

**Results:** Out of all respondents, 29,7% were primiparas and 70,3% were multiparas. Their age varied between 17-48 years. The respondents were highly satisfied (including combined options "I am totally satisfied" and "I am partly satisfied") with intrapartum care on all measured



dimensions of empowerment, which were bio-physiological (Mean 4.50), functional (Mean 4.40), cognitive (Mean 4.62), social (Mean 4.71), experiential (Mean 4.47), and ethical (Mean 4.74). However, of the single original questions included in the different sum variables formed according to the dimensions, the mothers were not quite so satisfied with their possibilities to move and use different positions during the labour, with the breathing and relaxing assistance received, with their possibilities to influence on pain control, with maintaining their sense of control and with the amount of time the family members could spend among each other only. The way the labour had started, length of the way to the hospital, level of professional education, parity, gestational age, and the use/non-use of non-medical pain relief were associated with satisfaction/dissatisfaction on certain dimensions.

**Conclusions:** From the point of view of the client satisfaction, the quality of care was mainly good. The findings of this study can be used in the continuous quality work of the maternity hospitals and for educational purposes.

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## WOMEN'S DESCRIPTIONS ON THEIR EXPERIENCES OF SATISFACTION OR DISSATISFACTION WITH INTRAPARTUM CARE IN A UNIVERSITY HOSPITAL

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**Background:** As part of research on the quality of maternity care from the clients' perspective, it is important to ask postpartum women about their possible experiences on satisfaction or dissatisfaction with intrapartum care.

**Aim:** To describe women's experiences of satisfaction or dissatisfaction with intrapartum care.

**Methods:** The data was collected between June – August 2020 with an open question, as part of a larger survey in a university hospital. Postpartum women were invited to write about their possible experiences of satisfaction or dissatisfaction with intrapartum care. The data (n=175) was analyzed with a deductive qualitative content analysis method. As framework, we used the theoretical approach of empowerment, including bio-physiological, functional, cognitive, social, experiential, and ethical dimensions.

**Results:** We found 350 meaningful expressions. They were sorted out based on the six dimensions of empowerment, based on the primiparity (P) (120 meaningful expressions) or multiparity (M) (230 meaningful expressions), and based on whether they expressed satisfaction or dissatisfaction.

On bio-physiological dimension, we found 23 expressions of satisfaction and 23 expressions of dissatisfaction. On functional dimension, the numbers were 3 and 7, on cognitive dimension 26 and 13, on social dimension 94 and 22, on experiential dimension 90 and 24, and on ethical dimension 18 and 7, respectively.

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We found more expressions of satisfaction of primiparas on all other dimensions, except on the functional dimension, where there were more expressions of dissatisfaction compared with satisfaction. As for multiparas, there were more expressions of satisfaction on all other dimensions, except on bio-physiological dimension, where there were more expressions of dissatisfaction compared with satisfaction, and on functional dimension, where the number of the expressions of satisfaction and dissatisfaction was equal.

**Conclusions:** Women expressed both satisfaction and dissatisfaction with intrapartum care. These findings can be utilized in the development of intrapartum care and for educational purposes.

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## UNDERSTANDING THE EXPERIENCE OF PARTNERS TO WOMEN WHOSE PREGNANCY IS COMPLICATED BY PREECLAMPSIA

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**Background:** Preeclampsia affects 3-8% of all pregnant women and is one of the leading causes of maternal morbidity and deaths worldwide. In a Nordic context, a midwife-led maternity care during pregnancy is the standard of care. Women diagnosed with preeclampsia are followed closely to ensure the best possible outcome for mother and baby. The cure is removal of the placenta, making preeclampsia one of the most common causes of premature birth. The woman's partner often plays a key role in supporting the woman during pregnancy, birth and postpartum. Little is known about the experiences of partners to women whose pregnancy is complicated by preeclampsia. Such knowledge is needed in order for midwives to provide evidence-based care to the whole family and to strengthen both parents' transition to parenthood.

**Aim:** To deepen the understanding of the experiences of being a partner to a woman whose pregnancy is complicated by preeclampsia.

**Methods:** This study is part of the GÖthenburg PReeclampsia Obstetric adVerse Events study (GO-PROVE), (ISRCTN13060768), which is a prospective multi center cohort study,

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investigating organ manifestation of preeclampsia and psychological impacts of the diagnosis. So far, six partners have been interviewed 6 to 16 months after birth. The interviews lasted from 45-107 minutes, with a mean of 82 minutes. The participants were selected through a purposive sampling depending on the severity of their spouses' preeclampsia. The interviews were conducted with open-ended questions, such as "Can you tell me about how you found out that your spouse had been diagnosed with preeclampsia?" as well as questions regarding the pregnancy and birth. The interviews were transcribed verbatim and are being analyzed using qualitative content analysis inspired by Elo & Kyngäs, 2008.

**Results:** Data collection is currently ongoing and results, as well as conclusions and recommendations for practice, will be presented at the conference.

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## MONITORED BUT NOT SUFFICIENTLY GUIDED; A QUALITATIVE DESCRIPTIVE INTERVIEW STUDY OF MATERNITY CARE EXPERIENCES AND NEEDS IN WOMEN WITH CHRONIC MEDICAL CONDITIONS

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**Background:** The proportion of childbearing women with chronic medical conditions in Denmark has increased from four to 16% over the past three decades. Women with chronic medical conditions have an increased risk of complications during pregnancy and childbirth.

**Aim:** To explore maternity care experiences and needs of women with various types of chronic medical conditions receiving specialized maternity care.

**Methods:** A qualitative descriptive study in Copenhagen, Denmark, a highly specialized hospital providing maternity care to women with high-risk pregnancies. We included fourteen purposefully selected women referred to specialist maternity care at a large tertiary hospital due to one or more chronic medical conditions. We performed individual in-depth interviews, which were analyzed using thematic analysis.

**Results:** One overarching theme was identified: Monitored but not sufficiently guided. Three main themes unfolding this overarching theme were: Chronic condition as determining pregnancy care, Childbearing woman as messenger and interpreter, and Feelings of abandonment after giving birth.

**Conclusions:** Across various types of chronic medical conditions, women expressed a need for increased continuity in specialized maternity care. Healthcare professionals should help women with chronic medical conditions navigate the healthcare system and interpret complex information.

Implications for practice: Pregnancy should be recognized as a significant life event, even though the childbearing woman is living with a chronic medical condition, and professionals should emphasize the aspects of pregnancy that develop uncomplicated. Information about the anticipated development of chronic medical conditions postpartum and concerns regarding breastfeeding could preferably be addressed during pregnancy. Continuity of care was essential to the women and could relieve some of the worrying women experienced during pregnancy.

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## NEGATIVE BIRTH EXPERIENCE IN RELATION TO EVENTS DURING LABOUR. FINDINGS FROM A MIXED METHODS STUDY IN SWEDEN.

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**Background:** Negative birth experience is a multidimensional phenomenon, which among other things is associated with postpartum depression, post-traumatic stress disorder and future fear of childbirth. Quantitative studies have mapped risk factors for negative birth experience, and qualitative research have explored women's experiences of birth as traumatic. However, qualitative and quantitative findings have only to a minor extent been integrated, something which could provide a better understanding of the subject. For example, there is a lack of knowledge of how mode of birth and clinical events during labour, such as ineffective epidural anaesthesia, prolonged second stage of labour, birth during nightshift and signs of foetal asphyxia, interact and correspond to women's descriptions of negative birth experience.

**Aim:** To explore negative birth experience in relation to mode of birth and clinical events during labour.

**Methods:** This study has a convergent parallel mixed methods design. Qualitative and quantitative data were collected from 112 women with low ratings of overall birth experience, participating in a randomised controlled trial evaluating internet-based cognitive behavioural therapy. Qualitative data derives from an online questionnaire completed before randomisation, approximately 12 weeks postpartum. Quantitative data concerning labour and delivery derives from medical records.

Written descriptions of negative birth experience are analysed by qualitative content analysis with an inductive approach. Qualitative findings will then be quantified, by identifying themes as present or absent for every participant, and compared to quantitative data on mode of birth and clinical events during labour, to illustrate the phenomenon of negative birth experience.

**Results:** The analysis is ongoing and results will be presented at the NJF Congress.

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**Conclusions:** The analysis is ongoing and conclusions will be presented at the NJF Congress.

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## WOMEN'S EXPECTATIONS ABOUT CONTINUITY OF CARE AND THE FORTHCOMING BIRTH ARE FULLFILLED TO A MINOR DEGREE – A SWEDISH COHORT STUDY

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**Background:** Women's expectations towards birth and postpartum period are of concern for midwifery care. The significance of expectations when it comes to experiences is somewhat debated and more research is valuable.

**Aim:** To investigate pregnant women's expectations on the forthcoming birth and postpartum period and to follow up on their experiences two months after birth.

**Methods:** A longitudinal cohort study was performed of 280 pregnant women recruited to a continuity of midwifery care project and followed up two months after birth. Data were collected using two questionnaires. Expectations and experiences of intrapartum and postpartum care and background variables were collected. Odds ratios with a 95% confidence interval and differences in proportions were used in the analysis.

**Results:** The majority of the women rated continuity as important during pregnancy, but few actually had a known midwife assisting during labour and birth. Positive birth expectations were associated with positive birth experiences. Ten percent of women preferred a caesarean section, and 15% had a surgical birth. Many women preferred a short postnatal stay, and 63% went home within 24 hours. Thirty-six percent preferred to have postnatal home visits, but only eight received home visits. Breastfeeding expectations were high, with 86% rating it as important. Two months after birth, 63% reported exclusively breastfeeding.

**Conclusions:** Pregnant women's expectations about continuity, the forthcoming birth, and birth preferences are fulfilled only to a minor degree. Access to evidence-based care would probably limit the gap between expectations and experiences in pregnant and childbearing women. Expectations driven by the women themselves were more likely to be fulfilled, while expectations driven by the health care system were less likely to be fulfilled.

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## “LISTEN TO WOMEN, LISTEN TO THEIR HEARTS, WHAT IS ULTIMATELY RIGHT FOR THEM.” MIDWIVES’ DECISION MAKING ON CONTRAINDICATED HOME BIRTH: A PHENOMENOLOGICAL STUDY

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**Background:** Homebirth rate in Iceland was at its lowest in the nineties. It has increased since the turn of the century and in 2009–2019 the rate was 1,7%–2,2%. Clinical guidelines issued by the Directorate of Health in 2007 cite several contraindications for homebirth. Some contraindication occurs in 8% of planned homebirths in Iceland.

**Aim:** The aim of the study was to examine the phenomenon “midwives’ decision making progress on attending contraindicated home birth” and answer the research question: “What affects whether a midwife chooses to attend to a woman who requests a homebirth with contraindications?”

**Method:** This was a qualitative study. Six midwives shared their experience with deciding whether to attend homebirths with contraindications. In depth interviews were performed and analysed using the Vancouver-school of phenomenology.

**Results:** Comprehensive analysis was made of the phenomenon, based on the interviews with midwives. The structure was presented as a diagram of a bowl with the main theme: “Listen to the women”. This main theme emerges through all interviews as the midwives describe the importance of women’s right to choose and know what is best for them. On the bottom of the bowl two themes are seen as a base for the midwives’ decisions. They were: “Informed decision of the woman” and “Law and autonomy outweighs clinical guidelines”. The other six themes float around the bowl: “The woman’s background”, “Midwife-woman relationship”, “Midwife’s instinct”, “A difficult decision”, “Attitudes and views of other healthcare personnel”, and “Safety first”.

**Conclusion:** The midwives can’t bear the thought of women choosing to birth unattended. They experience prejudiced criticism from other healthcare workers for attending homebirths with contraindications. The results of this study indicate that constructive and professional discussion where all parties can speak and be listened to should be recommended.

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## PSYCHOMETRIC PROPERTIES OF THE ICELANDIC TRANSLATION OF THE CHILDBIRTH EXPERIENCE QUESTIONNAIRE 2.0

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**Background:** The Childbirth Experience Questionnaire (CEQ-2) has been developed and tested in multiple languages, exhibiting excellent psychometric properties in English and Swedish.

**Aim:** The aim of this study is to translate and adapt the CEQ-2 to Icelandic and determine its psychometric characteristics.

**Methods:** The CEQ-2 was translated to Icelandic using forward-to back translation. Data was then collected among Icelandic speaking women in March 2021 in an online survey (N=1400).

**Preliminary results:** We will report face validity, internal consistency reliability, corrected-item-to-total correlations, factor loadings and convergent and discriminant validity of the Icelandic CEQ-2 scale. We will also report CEQ-2 scores, stratified by parity. Our results will provide knowledge of whether the Icelandic version of CEQ-2 is a valid and reliable instrument to measure childbirth experience among Icelandic women.

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## FACTORS OF A SUCCESSFUL IMPLEMENTATION OF USER-BASED QUALITY MEASUREMENT FROM THE MIDWIVES' POINT OF VIEW

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**Background:** Patient reported outcome measures (PREMs, PROMs) offers the opportunity to improve the woman-centeredness of midwifery care and to sensitively point out problem areas. In the German health care system, medical actors operate in a self-governing manner, meaning that the state can set legal frameworks, but configuration is autonomous. This also applies to internal and external quality development. Patient reported outcomes have not been part of existing quality measurement procedures in obstetric/ midwifery care so far. In a research project, instruments for user-based quality measurement within midwifery care were first developed (presented here in 2019) and then experts (n=6) and practical midwives (n=35) were interviewed on how implementation can succeed.

**Objectives:** To demonstrate how the implementation of user-based quality measurement in midwifery care can succeed in the context of a Bismarckian health care system.

**Method:** First, the current state of internal and external quality measurement in the obstetric sector in Germany will be reported. Then, the results of the interviews on inhibiting and promoting factors are presented. Based on this, it is presented how an implementation could be designed to be sustainably effective.

**Results:** The following were identified as important factors of implementation. An instrument should be oriented towards the specific goals of midwifery care. In addition, it should offer a standardized, validated and comparable part, but also offer the possibility of adaptation to one's own work context and goals. The tool should be digital, anonymous, culturally sensitive, and easy to understand, and communication about it should be as uncomplicated as possible for the midwife on an emotional and practical level.

The evaluation should be clear and understandable and include both positive factors and factors to be improved. The evaluation should be available on an individual level as well as on a team level and should also be usable for quality management or marketing. Optionally, benchmarking should also be available. Central seems to be the trust in an independent authority, such as an independent scientific institute, which performs the quality measurement.

**Conclusions:** These results provide significant evidence for implementation. So far, the implementation has not been realized and therefore could not be evaluated. Implementation research offers exciting insights to ensure that the development of tools can have a lasting impact and does not peter out. Knowledge about local contexts is important for a meaningful implementation. Knowledge about other contexts can broaden horizons and offer exciting new perspectives that can provide inspiration for innovative implementation in one's own context.

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## EVALUATING SHORT-TERM ESTROGEN FOR PREVENTION OF POSTPARTUM DEPRESSION IN HIGH-RISK WOMEN: THE MAMA TRIAL PROTOCOL

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**Background:** Perinatal depression affects 10–15% of women postpartum and has a recurrence rate of 40% in subsequent pregnancies. Perinatal depression is a disabling disorder that affects the entire family, including infant development and future health. Women who develop perinatal depression are suspected to be more sensitive to the fluctuations in sex steroid hormones, particularly estradiol, during pregnancy and postpartum.

**Aim:** This trial aims to evaluate the preventive effect of transdermal estradiol treatment for three weeks immediately postpartum on depressive episodes in a subgroup of women who are at high risk due to a history of perinatal depression.

**Methods:** The Maternal Mental Health (MAMA) Trial is double-blind, randomized, and placebo-controlled. The trial involves four departments of obstetrics organized under Copenhagen University Hospital in Denmark. Women with a history of perinatal depression are eligible to participate. Participants are randomized to receive either transdermal estradiol patches (200 µg per day) or placebo patches for three weeks immediately postpartum. The primary outcome is clinical depression, according to the DSM-V criteria of Major Depressive Disorder with onset at any time between 0 and 6 months postpartum. Secondary outcomes include, but are not limited to, symptoms of postpartum depression, exclusive breastfeeding, cortisol dynamics, maternal distress sensitivity, and cognitive function. With the inclusion of 220 participants and a 20% expected drop-out rate, we anticipate 80% power to detect a 50% reduction in postpartum depression while controlling the type 1 error at 5%.

**Perspectives:** With the MAMA Trial, we expect to clarify whether short-term transdermal estradiol treatment 0–3 weeks postpartum compared to placebo can prevent depressive episodes in the first six months postpartum in a group of women of high risk. If the MAMA Trial is successful, it can pave the way for precision prevention to protect maternal mental health and offspring development.

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## IN TIMES OF SHORTENING THE PERIOD AT THE POSTNATAL WARD – HOW CAN WE IMPROVE THE POSTNATAL CARE?

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**Background:** Postnatal period in hospital after birth has undergone major changes the last decades, mainly in terms of reduced length of stay. Similar to many other countries the length of postnatal care has decreased over time. In the national survey in Sweden show that despite overall satisfaction there is room for improvement. The shortcomings concern both participation in planning and insufficient information about the time postpartum period.

**Aim:** To improve the quality and satisfaction of the postnatal care while keeping the postnatal care in the hospital short.

**Methods:** In beginning of 2020 we identified an urgent need to improve our quality of care and initiated a structural process to ensure good and efficient care. By providing both first time and multiparous women several follow-up videocalls and/or phone calls along with increasing numbers of follow-up visits to the hospital instead of keeping the new family in the hospital.

**Results:** Parents emphasized the value of consistent advice about breastfeeding, sufficient check-ups and practical help and information about infant care. The results from our improvement quality process showed a decline in length at the hospital as a result of the structured follow up program of daily telephone and schedule return visits that was introduced in the structured process. We argue that care could be re-organized with improved satisfaction by interventions to support effective communication by digital media and on-call services.

**Conclusions:** Continuous work is needed in order to keep on improve the postnatal care as well as make sure that the family's who for medical reasons need to stay longer at the postnatal ward can do so.

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## TELEPHONE-BASED PEER SUPPORT FOR FATHERS TO PREVENT MENTAL ILLNESS.

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**Background:** Meta-analytic results suggest that approximately 10% of father will experience depression within the first year following childbirth.

**Aim:** To examine if telephone-based peer support is effective in preventing depression among first time fathers in Sweden with beginning depressive symptoms.

**Methods:** A pilot randomized controlled trial will be conducted. Screening will identify fathers with Edinburgh Postnatal Depression Scale (EPDS). The eligible and consenting fathers scoring > 9 will complete a baseline questionnaire and then be randomly assigned to telephone-based peer support (intervention group) or standard community support (control group) by a trained research assistant. Fathers allocated to the peer support group will be matched with a peer volunteer and receive individualized telephone-based support initiated by the peer volunteer within 24-48 hours of randomization. Frequency of peer support will be tracked by a peer volunteer activity log and will be based on paternal need. Peer volunteers are experienced fathers recruited from the community who have participated in a 4-hour training session. At 4 and 6 months postpartum all study participants will complete follow-up questionnaires. Study outcomes include the Edinburgh Postnatal Depression Scale and published measures related to anxiety, parenting stress, and marital satisfaction. Intention to treat analysis will be completed when comparing differences between the study groups. We will also examine feasibility data related to trial acceptance and attrition rates. We will also collect data regarding peer support satisfaction among those randomized to the intervention group.

**Expected results and conclusions:** The outcome of this study could provide useful clinical guidelines to identify and reduce paternal depression and parenting stress. Instead of focusing on medical treatment by professionals, the father community could be utilized to support each other through the provision of peer support and promote positive transitions into fatherhood. We also intent to explore as a secondary analysis risk factors for paternal depression in order to facilitate developing other interventions to meet father's needs.

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## THE USEFULNESS OF WRITTEN SELF-CARE INSTRUCTIONS FOR BREASTFEEDING PAIN RELIEF EVALUATED BY MOTHERS ON A POSTNATAL WARD

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**Background:** Pain in breastfeeding has been found to be associated with a greater risk of depressive symptoms in mothers and thus, specific support should be directed toward helping mothers experiencing pain while breastfeeding.

**Aim:** The purpose of this study was to describe the usefulness of written self-care instructions for breastfeeding pain relief evaluated by mothers on a postnatal ward.

**Methods:** The data was collected at two postnatal wards during a period of two months. Mothers who experienced pain while breastfeeding were invited to participate. The questionnaire for the mothers included a VAS-scale and open-ended questions. The mothers were invited to report their experience of pain with the VAS-scale and after that, they were instructed to either use the self-care instructions for pain relief provided in the questionnaire or to ask a staff member for help; they could also do both of these options if desired. After the breastfeeding, the mothers were asked to evaluate the usefulness of the self-care instructions and/or the usefulness of the help received from the staff member. The data was analyzed using descriptive statistics and a qualitative content analysis method.

**Results:** The mean value for the breastfeeding pain experienced by the mothers (n=12) on the VAS-scale was 4.5. Of the participating mothers, five had used all the self-care instructions provided and seven had used two of three instructions. Some mothers had also asked a staff member for help. The staff members had used the same methods which were described in the self-care instructions and the mothers reported that they had been helpful. The participating mothers were satisfied with both the self-care instructions and the help given by the staff.

**Conclusions:** Use of written self-care instructions for breastfeeding pain relief on postnatal wards along with help by the staff members can be recommended.

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## MATERNITY WARD STAFF PERCEPTIONS OF EXCLUSIVE BREASTFEEDING IN FINNISH MATERNITY HOSPITALS: A CROSS-SECTIONAL STUDY

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**Background:** Breastmilk is the most nutritious food for newborn infants. Exclusive breastfeeding is recommended for everyone because of its many health effects.

**Aim:** This study aimed to describe exclusive breastfeeding (EBF, Step 6 of the Baby-Friendly Hospital Initiative) in Finnish maternity hospitals and identify factors that promote or limit EBF.

**Methods:** A cross-sectional study design was used, and data were collected from eight maternity hospitals in Finland during a 10-day period in May 2014. The staff completed questionnaires (n=1554) from separate work shifts. The data were analyzed using descriptive statistics, and chi-squared and Fisher's tests. Responses to open-ended questions were analyzed using content analysis.

**Results:** Maternity ward staff reported that 72% (n=1105) of the infants were exclusively breastfed during their work shift. The strongest promoting factors of exclusive breastfeeding were: maternity ward staffs' profession and education in breastfeeding counselling; multiparity; vaginal delivery; early skin-to-skin contact between mother and infant; initial breastfeeding after birth; rooming-in; and initial success of breastfeeding. The use of a nipple shield, the need for additional breastfeeding counselling, and infants' blood tests were limiting factors to exclusive breastfeeding. Open-ended answers revealed that exclusive breastfeeding was mainly delayed because of medical issues for the mother or infant.

**Conclusions:** Finnish maternity hospitals could improve exclusive breastfeeding rates by focusing attention and resources on breastfeeding counselling and evidence-based maternity care practices related to immediate care after birth, promoting vaginal delivery, rooming-in and availability of skilled counselling.

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## BREASTFEEDING WOMEN WITH A BREAST ABSCESS EXPERIENCED THEIR TREATMENT AS PROLONGED, UNPLEASANT AND OFTEN UNSATISFACTORY – A SWEDISH INTERVIEW STUDY

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**Background:** Women commonly experience difficulties with breastfeeding, including mastitis and breast abscess. They are not always given optimal support and therefore unable to reach their breastfeeding goals. Healthcare professionals receive minimal education about diagnosis and management of breast abscess, and the patient's point of view has not been studied.

**Aim:** To explore women's experiences of puerperal breast abscess and its treatment in a group of Swedish women.

**Methods:** A qualitative cross-sectional study with 18 study participants was undertaken. Potential participants were identified through electronic medical records at a university hospital; audio-recorded telephone interviews were conducted with consenting participants. A thematic analysis in six steps according to Braun and Clark identified two themes.

**Results:** The women's experiences of breast abscess and its treatment were described by the themes, "Seeking care and receiving treatment was long and unpleasant", and "Importance of adequate professional care". The women with breast abscess experience were uncertain where to ask for professional help. They had to wait a long for the right time to undergo an unpleasant and painful drainage of the breast abscess. The women felt it was important to receive professional care with respectful communication, continuity of care, and to receive adequate information, but they did not always receive this.

**Conclusions:** Breast abscess and its treatment were demanding for women. Professional support was valued highly but was not always given. Healthcare professionals need adequate training in order to deal with breastfeeding problems in a patient-centred evidence-based manner.

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