

Den komplicerede fødsel – Men hvad så næste gang?

Maria Jeppegaard,
Læge, PhD-studerende
Amager Hvidovre Hospital

Agenda

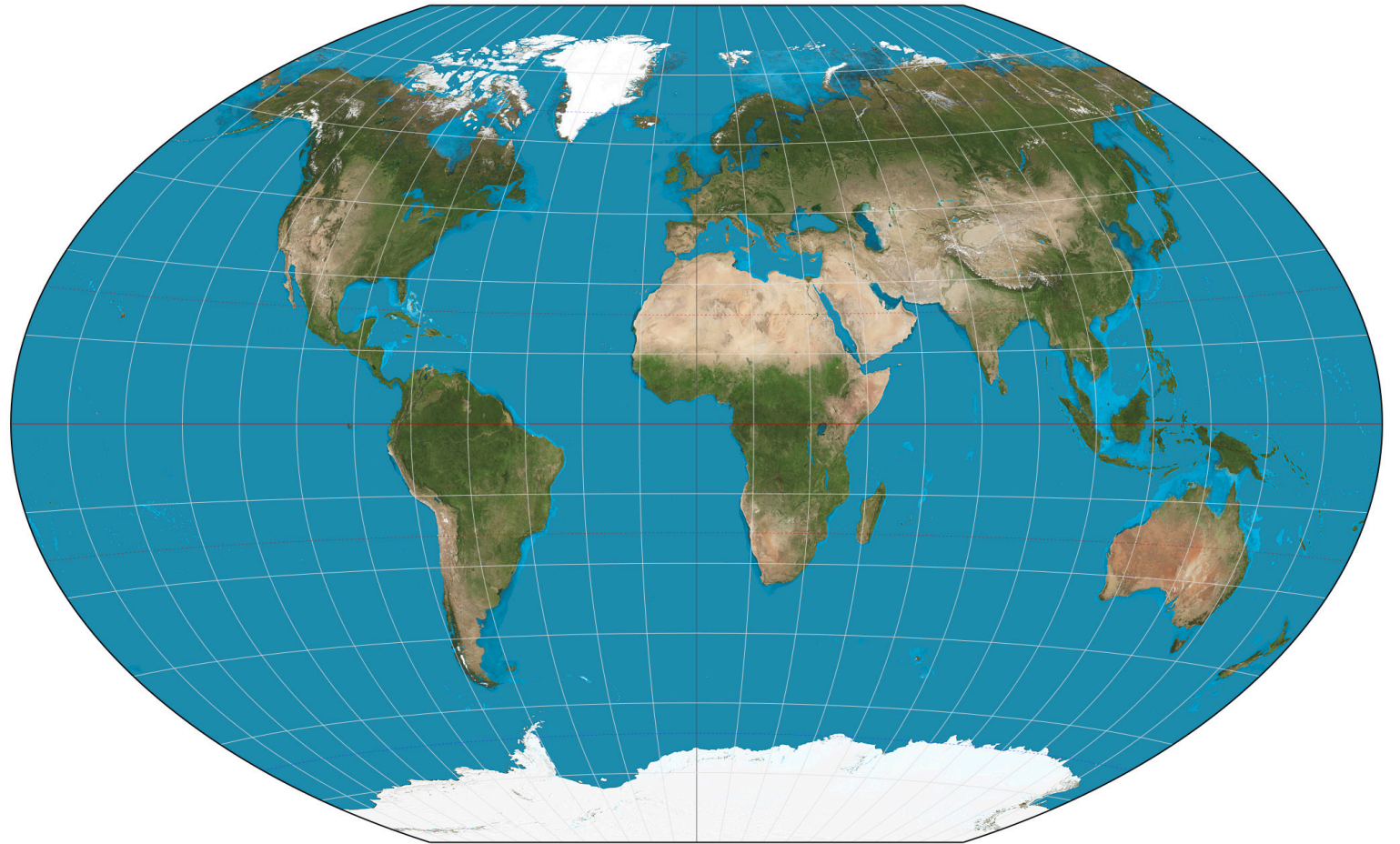
PPH

Skulderdystoci

Post partum blødning



Hvad ved vi?



Hvad ved vi?

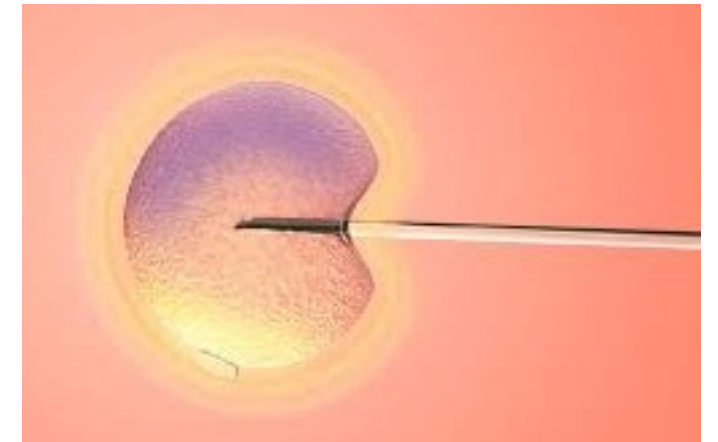
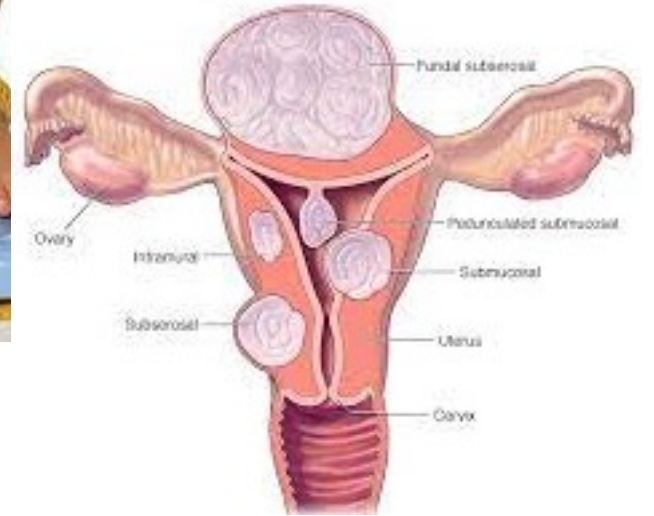
- PPH exceeding 1000 mL occurs in 6-7% of all childbirths in Denmark, according to the Danish National Clinical Quality Database for Births
- Ca 700 fødsler med PPH > 1000 ml på AHH I 2021

Hvad ved vi?

- Risikofaktorer:

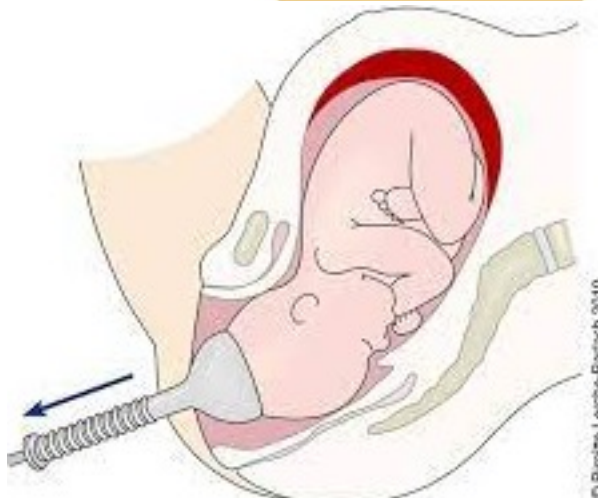


Background - Maternal risk factors

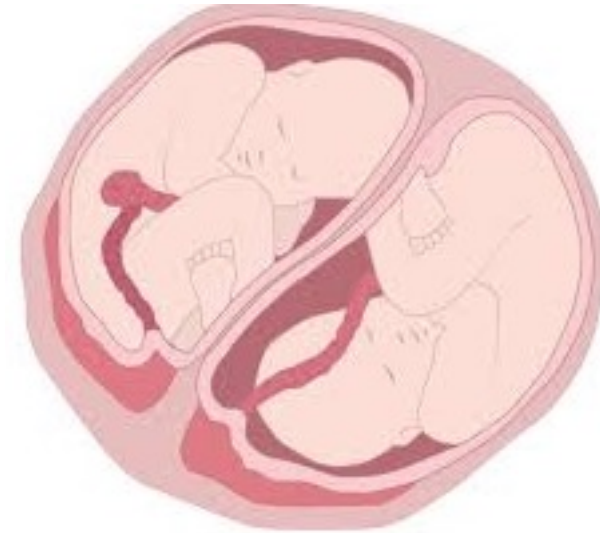


Background-intrapartum risk factors

Induction of Labour



Background - Fetal risk factors



› [Am J Obstet Gynecol.](#) 2014 Mar;210(3):229.e1-8. doi: 10.1016/j.ajog.2013.10.872. Epub 2013 Oct 26.

Patterns of recurrence of postpartum hemorrhage in a large population-based cohort

Anna Sara Oberg¹, Sonia Hernandez-Diaz², Kristin Palmsten², Catarina Almqvist³,
Brian T Bateman⁴

Affiliations + expand

PMID: 24351791 PMCID: [PMC3943527](#) DOI: [10.1016/j.ajog.2013.10.872](#)

Hvem?

- Inkluderede alle primiparius kvinder i perioden 1997 til 2009 i Sverige
- → 914939 fødsler
- PPH > 1000 ml

Hvad?

- Historie med PPH øgede risikoen x 3 (5% → 15%)
- Øget risiko hvis man var af scandinavisk herkomst
- Øget risiko hvis man boede med BF

TABLE 4

Risk of postpartum hemorrhage in the second pregnancy according to a history and specific type and restricted to vaginal deliveries



Pregnancy history			Recurrence in vaginal deliveries									
First pregnancy	Type	n	Any postpartum hemorrhage		Retained placenta		Atony		Lacerations		Severe	
			%	RR (95% CI)	%	RR (95% CI)	%	RR (95% CI)	%	RR (95% CI)	%	RR (95% CI)
No	—	226,310	3.7	1.0	1.2	1.0	1.8	1.0	0.2	1.0	0.5	1.0
Yes	Any	13,552	14.2	3.8 (3.6–4.0)	6.1	5.3 (4.9–5.7)	5.7	3.3 (3.0–3.5)	0.8	3.4 (2.7–4.1)	2.3	5.0 (4.4–5.6)
	Retained placenta	4114	18.3	4.9 (4.6–5.2)	12.0	10.4 (9.5–11.4)	4.4	2.5 (2.2–2.9)	0.4	1.9 (1.2–3.1)	3.9	8.4 (7.1–9.9)
	Atony	4957	12.8	3.4 (3.2–3.7)	3.6	3.1 (2.7–3.6)	7.0	4.0 (3.6–4.4)	0.7	2.9 (2.0–4.1)	1.7	3.7 (3.0–4.6)
	Lacerations	2007	12.6	3.4 (3.0–3.8)	3.2	2.8 (2.2–3.6)	5.7	3.2 (2.7–3.9)	1.7	7.8 (5.5–10.9)	1.4	2.9 (2.0–4.3)
	Severe	2032	18.8	5.0 (4.6–5.5)	6.2	5.4 (4.5–6.4)	9.7	5.5 (4.8–6.3)	0.8	3.5 (2.1–5.8)	4.2	9.1 (7.4–11.3)

CI, confidence interval; RR, relative risk.

Oberg. Recurrence of postpartum hemorrhage. *Am J Obstet Gynecol* 2014.



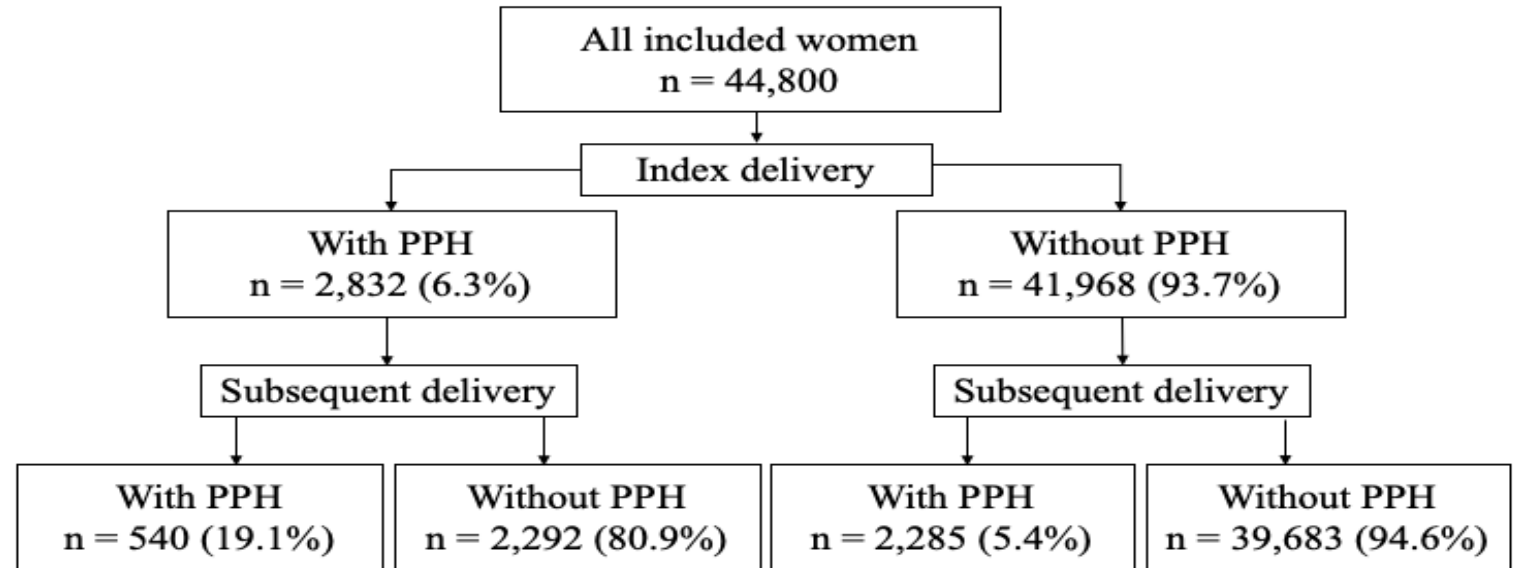
Incidence of postpartum hemorrhage and risk factors for recurrence in the subsequent pregnancy

Amalie Birkmose Thams¹  · Marie Høygaard Larsen¹ · Steen Christian Rasmussen¹ · Maria Jeppegaard¹ · Lone Krebs^{1,2} 

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Included



- The risk of PPH in a subsequent pregnancy was 3.5-fold higher among women with PPH at index delivery compared to women with no history of PPH (19.1% and 5.4%, OR= 4.1; 95% CI: 3.7- 4.5)

Recurrence of PPH

Table 2 Recurrence of PPH in combination with blood transfusion or manual removal of placenta (MRP) at subsequent delivery according to PPH history at index delivery

Index birth	Subsequent birth								
	PPH category								
	PPH (<i>n</i> = 2825)			PPH and blood transfusion (<i>n</i> = 373)			PPH and MRP (<i>n</i> = 776)		
	<i>n</i>	%	OR (95% CI)	<i>N</i>	%	OR (95% CI)	<i>n</i>	%	OR (95% CI)
Reference	2285	5.4	Reference	290	0.7	Reference	584	1.4	Reference
Blood loss < 1000 mL (<i>n</i> = 41,968)									
PPH (<i>n</i> = 2832)	540	19.1	4.1 (3.7–4.5)	83	2.9	4.3 (3.4–5.6)	192	6.8	5.2 (4.4–6.1)
PPH and blood transfusion (<i>n</i> = 462)	116	25.1	5.2 (4.2–6.4)	24	5.2	6.9 (4.5–10.6)	47	10.2	6.8 (5.0–9.2)
PPH and MRP (<i>n</i> = 737)	179	24.3	5.0 (4.2–56.0)	38	5.2	7.1 (5.0–10.0)	103	14.0	10.5 (8.4–13.1)

PPH Postpartum hemorrhage, *MRP* Manual removal of placenta, *OR* Odds ratio, *CI* Confidence interval

Results – subsequent delivery

Table 4 Subsequent deliveries of women with PPH at index delivery ($n=2832$)

4.1: Planned mode of subsequent delivery (only vertex presentation)

PPH category	Delivery mode				
	Planned CS ($n=532$)	Planned vaginal delivery ($n=2200$)	p value	OR	95% CI
PPH	$n=69$ (13.0%)	$n=457$ (20.8%)	<0.001	0.6	0.4–0.7
PPH and blood transfusion	$n=6$ (1.1%)	$n=76$ (3.5%)	<0.01	0.3	0.1–0.7
PPH and MRP	$n=0$ (0%)	$n=192$ (8.7%)	<0.001	0.01*	0.001–0.2

4.2: Onset of labor at subsequent delivery (only vaginal deliveries)


	Induction of labor ($n=575$)	Spontaneous start of labor ($n=1418$)	p value	OR	95% CI
PPH	$n=142$ (24.7%)	$n=249$ (17.6%)	<0.001	1.5	1.2–1.9
PPH and blood transfusion	$n=33$ (5.7%)	$n=35$ (2.5%)	<0.001	2.4	1.5–3.9
PPH and MRP	$n=65$ (11.3%)	$n=127$ (9.0%)	0.1	1.3	0.9–1.8

The effect of planned delivery mode and onset of labor on PPH recurrence risk. References are deliveries with blood loss <1000 mL ($n=2292$). p values, odds ratios and 95% CI are calculated based on respectively caesarean section and induction of labor

PPH Postpartum hemorrhage, CS Caesarean section, MRP Manual removal of placenta, OR Odds ratio, CI Confidence interval.



Recurrence of postpartum hemorrhage, maternal and paternal contribution, and the effect of offspring birthweight and sex: a population-based cohort study

Lorentz Erland Linde¹  · Cathrine Ebbing^{1,2} · Dag Moster^{3,4} · Jörg Kessler^{1,2} · Elham Baghestan^{1,2} · Mika Gissler^{5,6} · Svein Rasmussen¹

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Facts

- Singleton med GA >21+6 i Norge fra 1967-2017
- 2.790.090 fødsler
- 10% med PPH



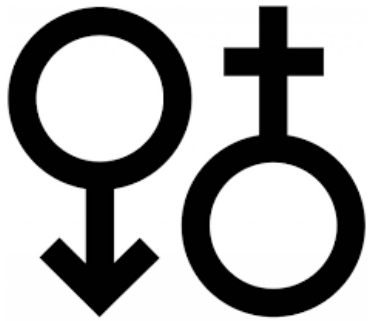
Og hvad fandt de så?



- 3-gange så høj risiko for PPH ved anden fødsel sammenlignet med kvinder uden tidligere PPH
- The risk of severe PPH >1500 ml in the second delivery was higher for mothers with severe PPH in the first delivery (aOR: 6.0, 95% CI 5.5–6.6), than for those with PPH of >500 ml (aOR: 3.5, 95% CI 3.3–3.7)



- Subsequent pregnancy: 64.0% and 74.8%



- Dreng: aOR 0.89 (95%CI 0.88-0.90)

(aOR: 1.12, 95% CI 1.03–1.21)



- Øget BW → øget risiko (5 kg: OR 8.06 (95%CA 7.06-9.21))

Og hvad fandt de så?

Take Home



- Ca. 3.5 gange øget risiko for gentagelse
- Jo sværere forløb første gang → jo højere risiko

Skulderdystoci



Introduktion

Incidence 0,2%-3%

Variierende definition:

- "Failure to deliver the fetal shoulder(s) with gentle downward traction of the fetal head, requiring additional obstetric maneuvers to effect delivery"
- Head-to-body delivery-time of more than 60 seconds



Alvorlig komplikation

Føtale komplikationer: plexus brachialis parese (BPI),
Clavikel- og humerus fraktur, asfyksi og mortalitet

Maternelle komplikationer: bristninger og PPH

Review Article

Risk of recurrent shoulder dystocia: are we any closer to prediction?

Shadha Al-Hawash, Clare L. Whitehead   & Dan Farine

Pages 2928-2934 | Received 25 Feb 2018, Accepted 06 Mar 2018, Published online: 27 Mar 2018

- 1980-2018: 13 studies

Table 2 of 3

Table 2. Rate of recurrent shoulder dystocia in women attempting a subsequent vaginal birth.

Author	Total vaginal cephalic deliveries (n)	Total patients with shoulder dystocia (n)	Rate of primary shoulder dystocia (%)	Total subsequent pregnancies (n, % of index)	Total vaginal births (n, % of subsequent births)	Recurrent shoulder dystocia (n)	Rate of recurrent shoulder dystocia (%)
Smith [21]	34,800	203	0.6	51 (25.1)	42 (81.6)	5	11.9
Lewis [15]	37,465	747	2	Not reported	123	17	13.8
Baskett [12]	40,518	254	0.6	Not reported	93	1	1.25
Bahar [11]	13,756	69	1.16	Not reported	Not reported	9	13
Olugbile [19]	24,100	154	0.53	20 (12.9)	18 (90)	2	11.1
Ginsberg [13]	39,681	602	1.5	73 (12.1)	66 (91.4)	11	16.7
Mehta [17]	25,995	205	0.8	47 (22.9)	42 (89.4)	4	9.5
Usta [22]	22,207	193	0.9	48 (24.8)	44 (91.7)	11	25
Moore [18]	1,126,593	26,208	2.3	8991 (34.3)	7819 (87)	1,060	13.5
Overland [20]	554,773	2,745	0.5	2745 (100 – study design)	2344 (85.4)	170	7.3
Lima [16]	23,158	66	0.3	Not reported	Not reported	13	20
Ouzounian [25]	267,228	1904	0.7	Not reported	270	10	3.7
Kleitman [14]	201,422	425	0.2	307 (72%)	236 (76.9)	11	3.6

Og hvad fandt de?

-
- Many of these risk factors were present in women who did not have a recurrent shoulder dystocia.
-
-
-
-
-

Incidence of shoulder dystocia and risk factors for recurrence in the subsequent pregnancy

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Amalie B THAMS, MD, Copenhagen university, Denmark

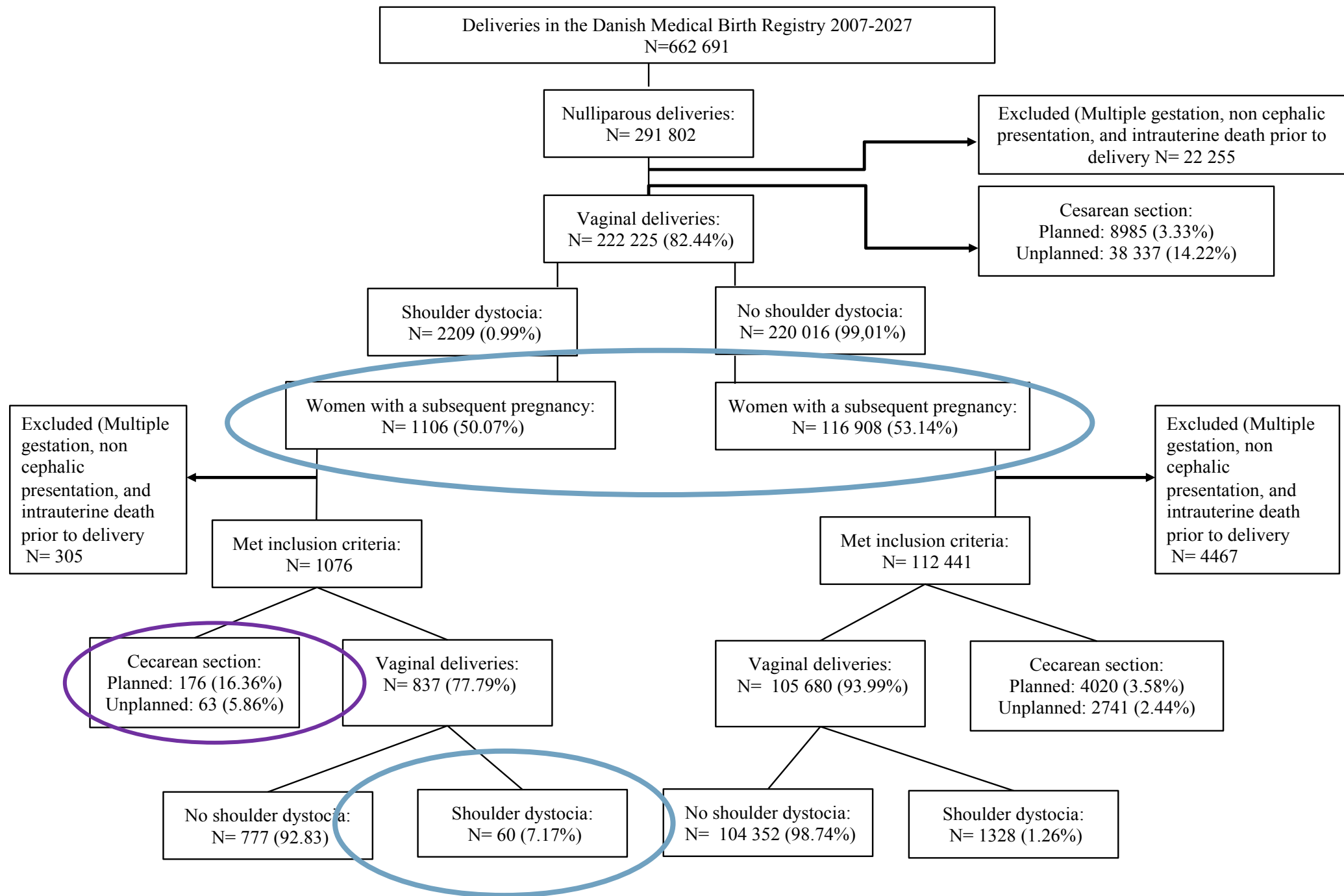
Amalie Bøggild, MD, PhD, Amager Hvidovre hospital, Denmark

Steen C. RASMUSSEN, Mr., Holbæk Sygehus, Denmark

Lone KREBS, DmSc, Amager Hvidovre hospital, Denmark

Metode

- Retrospektivt register-studie baseret på alle fødsler registreret i DK fra 2007-2017
- Data fra MFR og LPR
- Diagnosekoder på mor+ barn fra LPR fra graviditetstidspunkt til 28 dage post partum
- Inklusionskriterier:
 - Nullipara
 - gravid med levende singleton foster
 - Hovedpræsentation
 - vaginal fødsel



Gentagelse af SD – risikofaktorer 2. fødsel



Højde < 160 cm:
OR 2.79 (95% CI: 1.20-6.4)
aOR 5.80 (95% CI: 2.28-14.73)



Instrumentel forløsning
OR 4.75 (95% CI: 1.93-11.69)
aOR 5.84 (95% CI: 2.07-16.49)



Vestim
OR 2.61 (95% CI: 1.47-4.66)
aOR 2.05 (95% CI: 1.08-3.89)

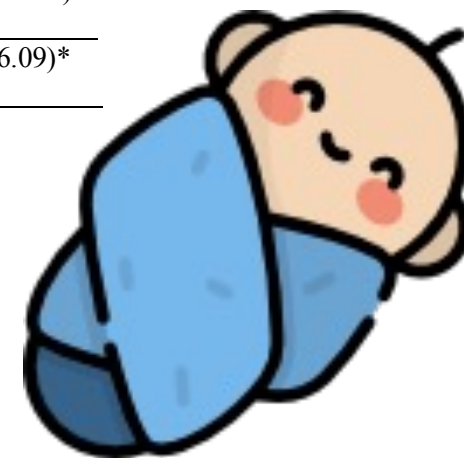
Gentagelse af SD – risikofaktorer 2. fødsel

Birth weight (n=836, missing n=1)					-		
<4 kg	539	3.7	20	96.3	519	1.0	1.0
4.0-4.5 kg	232	9.9	25	89.2	207	3.13 (1.70-5.77)	3.78 (1.97-7.28)*
>4.5 kg	65	23.1	15	76.1	50	7.78 (3.75-16.15)	11.85 (5.34-26.29)*



Gentagelse af SD – risikofaktorer 2. fødsel

Difference in birth weight from first to second delivery (n=837, missing n=2)							
Birth weight difference <0 g	515	3.5	18	96.5	497	1.00	1.00
Birth weight difference 0-250 g	153	5.9	9	94.1	144	1.73 (0.76-3.92)	1.44 (0.61-3.40)
Birth weight difference +250-500 g	98	12.2	12	87.8	86	3.85 (1.79-8.28)	2.69 (1.16-6.24)*
Birth weight difference +500-750 g	48	29.2	14	70.8	34	11.37 (5.21-24.8)	6.58 (2.58-16.81)*
Birth weight difference >+750 g	21	33.3	7	66.7	14	13.8 (4.97-38.38)	7.75 (2.30-26.09)*



- Adjusted for: maternal height, maternal BMI, Birth weight

Kejsersnit vs. vaginal



Table 4: Characteristics of women with planned caesarean section (CS), intended vaginal delivery and acute caesarean section in subsequent delivery following shoulder dystocia at their first delivery.

		Planned CS *	Vaginal delivery *	Acute CS, intended vaginal
		n = 176 (16.36 %)	n = 900 (83.64%)	n=63
Characteristics, at the subsequent delivery				
Maternal age	mean (±SD)	31.4 (4.2)	30.2 (4.3)	31.3 (4.27)
Maternal age				
Age <30	n (%)	60 (34.1)	405 (45.0)	24 (38.1)
Age: 30-35	n (%)	89 (50.6)	397 (44.1)	29 (46.0)
Age >35	n (%)	27 (15.3)	98 (10.9)	10 (15.9)
Maternal height, (cm)	mean (±SD)	165.9 (6.9)	167.0 (6.3)	166.2 (6.8)
Maternal height ≤160 cm	n (%)	41 (23.3)	134 (14.9)	15 (23.8)
Maternal weight, mean (kg)	mean (±SD)	70.7 (16.0)	71.1 (18.0)	76.4 (20.2)
BMI	mean (±SD)	25.7 (5.5)	25.4 (5.8)	27.6 (6.52)
Smokers	n (%)	10 (5.7)	82 (9.1)	5 (7.9)
Diabetic disorders ^a	n (%)	33 (18.8)	73 (8.1)	4 (6.3)
Birth weight, g	mean (±SD)	3846 (514)	3834 (510)	3976 (616)
Outcomes at prior delivery complicated by shoulder dystocia				
Internal maneuvers	n (%)	94 (53.4)	443(49.2)	33 (52.4)
Operative vaginal delivery ^b	n (%)	113 (64.2)	385 (42.8)	34 (54.0)
Maternal morbidity ^c	n (%)	77 (43.8)	202 (22.4)	14 (22.2)
Post-partum hemorrhage >500 ml	n (%)	24 (13.6)	100 (11.1)	8 (12.7)
Perineal lesions ≥ 3. Degree	n (%)	68 (38.6)	117 (13.0)	8 (12.7)
Asphyxia ^d	n (%)	17 (27.0)	90 (10.0)	7 (11.1)
BPI and/or clavicular-fracture ^e	n (%)	37 (21.0)	52 (5.8)	4 (6.3)
CPAP ^f	n (%)	31 (17.6)	76 (8.4)	8 (12.7)

Vaginal fødsel vs. Akut CS

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Research

Obstetrics

Risk of shoulder dystocia in second delivery: does a history of shoulder dystocia matter?

Eva A. Overland MD^a, Anny Spydsaug MD^b, Christopher S. Nielsen PhD^c,
Anne Eskild PhD^{a c}



Hvem?

- Retrospective cohort study
- including all women in Norway with 2 consecutive singleton vaginal deliveries with fetus in cephalic presentation, during the period 1967-2005.
- $n = 537,316$

Hvad?

First delivery

Cesarean delivery
n = 38,373; 6.5%

Second delivery

Vaginal delivery
n = 554,773; 93.5%

Shoulder dystocia
n = 2,745; 0.5%

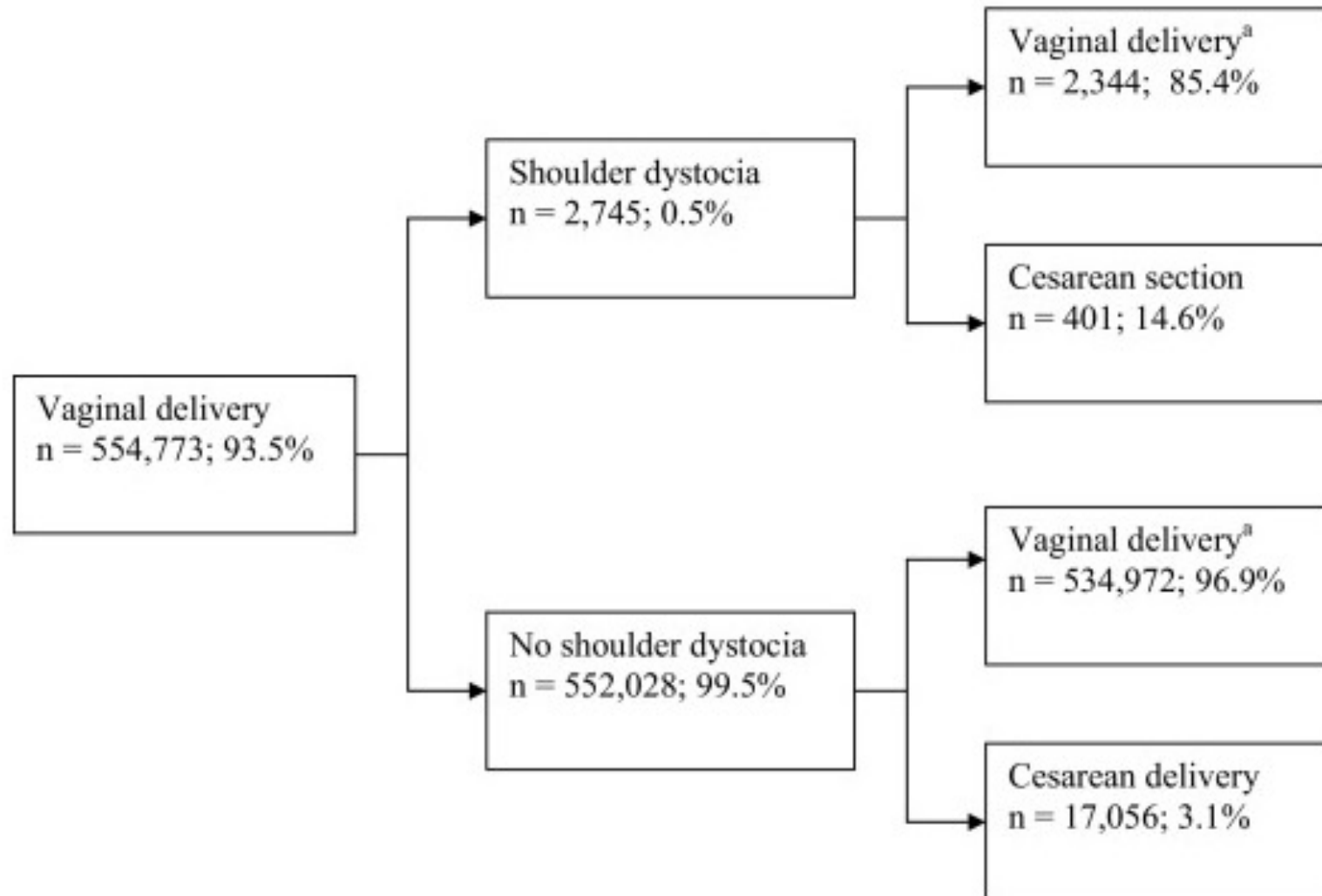
Vaginal delivery^a
n = 2,344; 85.4%

Cesarean section
n = 401; 14.6%

No shoulder dystocia
n = 552,028; 99.5%

Vaginal delivery^a
n = 534,972; 96.9%

Cesarean delivery
n = 17,056; 3.1%



1.fødsel

- 2475 kvinder havde SD i første fødsel
- 0.5%

2. fødsel

- Gentagne SD
- 7.3%

2.fødsel

- 4466 kvinder havde SD i 2. fødsel
- 0.8%

Kun 3.8% er gentagelse!

Hvad?

TABLE 3. Absolute risk (%) with 95% CI for shoulder dystocia at second delivery as a function of shoulder dystocia at first delivery and birthweight

Birthweight (g)	Shoulder dystocia at first delivery					
	Yes			No		
	%	95% CI	n	%	95% CI	n
< 3000	1.4	0.1-4.0	1/74	0.0	0.0-0.0	9/52,693
3000-3499	0.3	0.3-0.9	1/315	0.1	0.1-0.1	109/157,958
3500-3999	2.2	1.3-3.2	19/847	0.4	0.3-0.4	753/203,814
4000-4499	9.7	7.5-11.8	72/745	1.8	1.7-1.9	1717/97,170
4500-4999	19.9	15.4-24.3	62/312	6.3	6.0-6.6	1265/20,099
> 5000	29.2	16.3-42.0	14/48	17.4	15.9-18.9	438/2518

The analyses include 536,593 Norwegian women with first and second vaginal, cephalic delivery during 1967-2005, with known offspring birthweight.

CI, confidence interval.

Take Home

- Ca. 7% oplever gentagelse i en meget selekteret gruppe
- Overvej mors højde og estimeret fostervægt
- Obs på dystoci



Og hvad skal vi så gøre med den efterfølgende fødsel

Vær opmærksom
på disse kvinder –
er de visiteret
korrekt?

Overvej hvad der
er den bedste
fødemåde