Cosa un pediatra deve sapere sul parto

UNIVERSITÀ
DEGLI STUDI
DI BRESCIA

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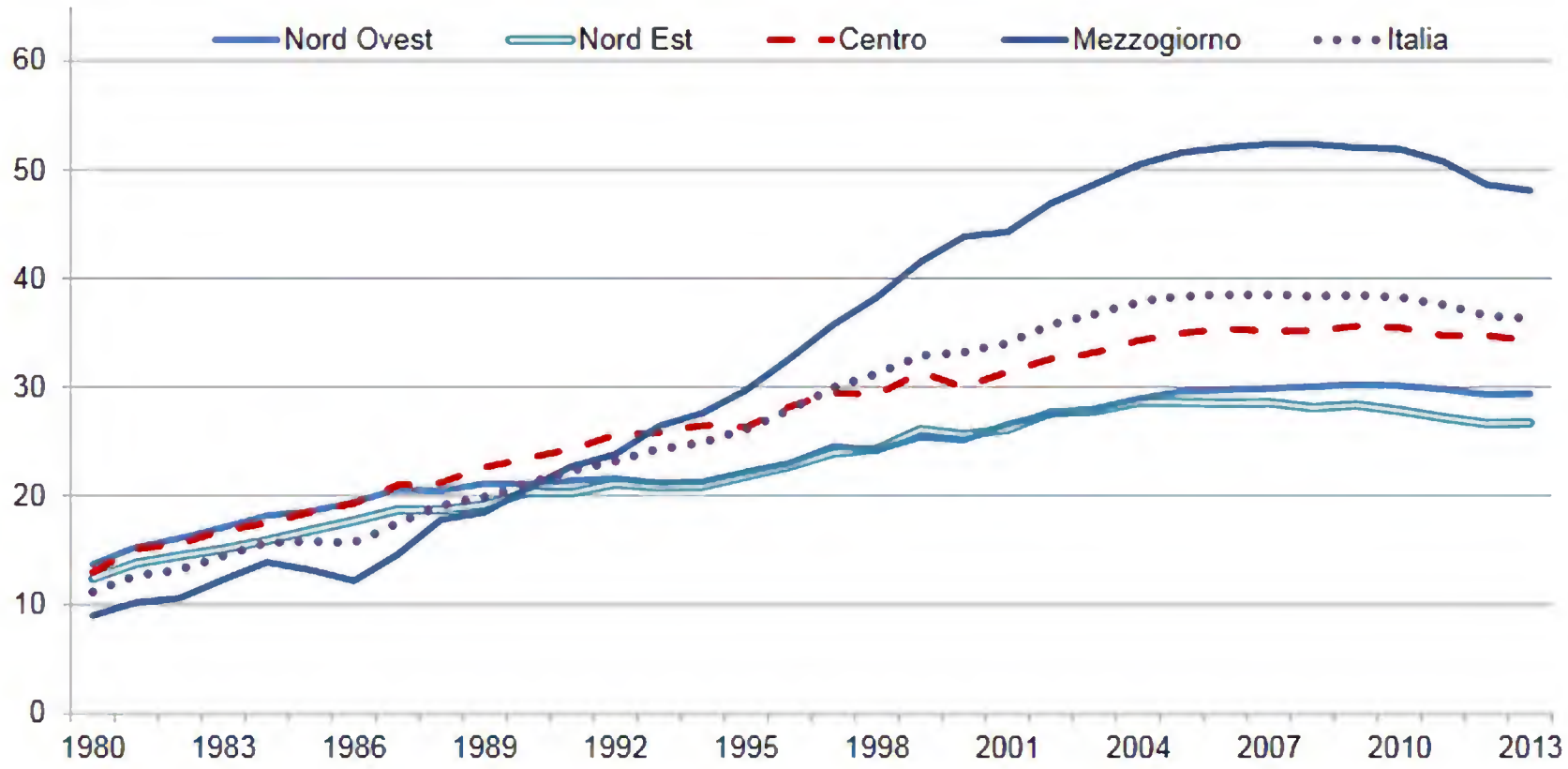
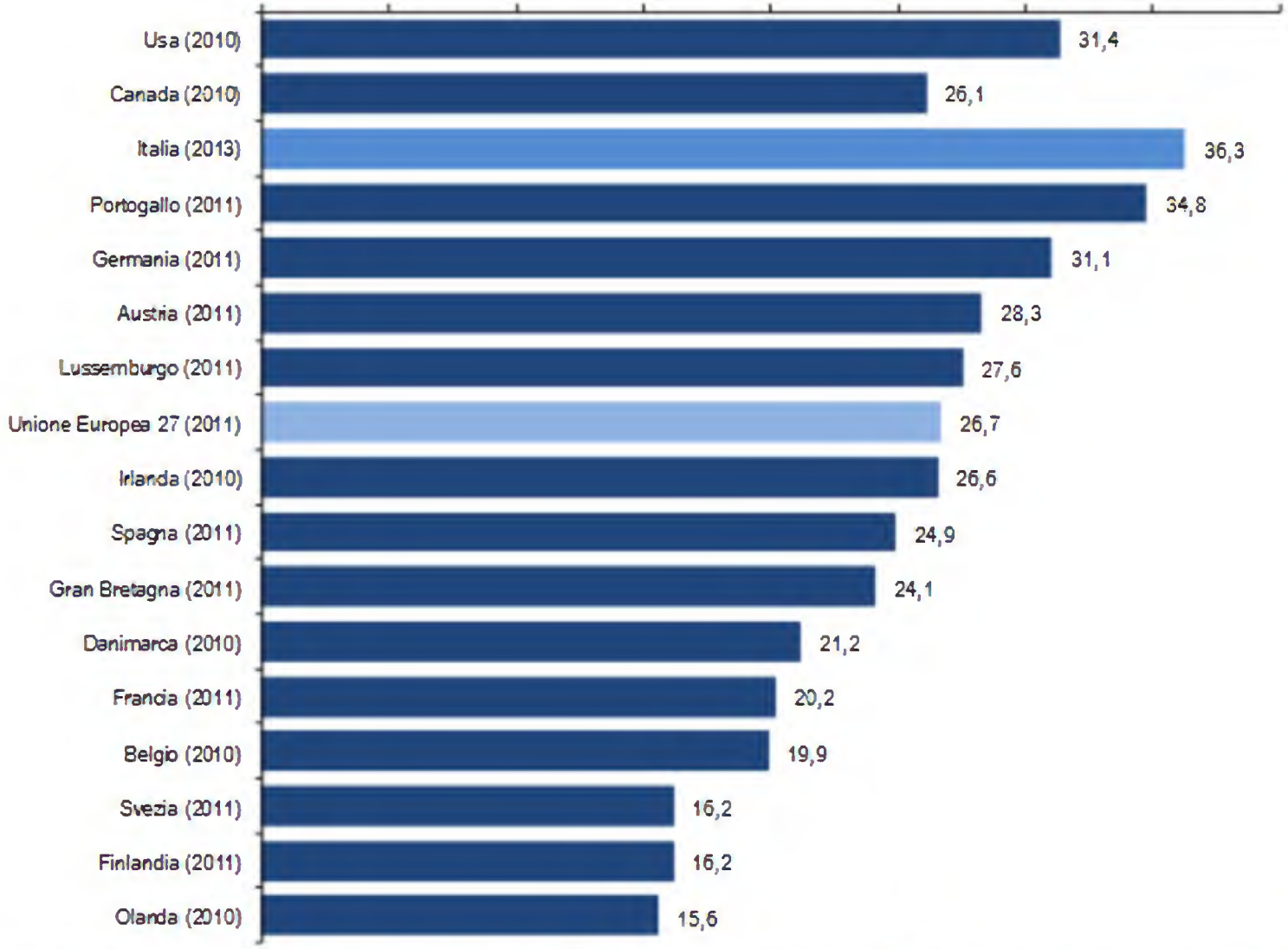


Fonte: Anni 1980-1998: Rilevazione delle nascite da fonte stato civile.
Dal 1999: Elaborazioni ISTAT su dati del Ministero della Salute, schede di dimissione ospedaliera.



Fonti: Per l'Italia "Ministero della salute - Schede di dimissione ospedaliera 2013". Per gli atri paesi fonte OCSE: Health database. Per il dato (EU27) European Health for all database WHO.

Durata della gravidanza

	WHO
Termine	280 (40+0)
Pretermine	<259 (37+0)
Post-termine	>294 (42+0)

Perché è importante una precisa datazione della gravidanza?

- Parto pretermine e parto post-termine comportano un rischio aumentato per il feto
- Controllare la regolare evoluzione di una gravidanza è molto difficile senza una precisa datazione
- Tutte le gravdidanze sono sottoposte a controlli ad epoche specifiche (es. ecografia morfologica, amnio, CVS)

Datazione della gravidanza

- Regola di Naegele
- Ruota ostetrica
- Esame obiettivo
- Ecografia

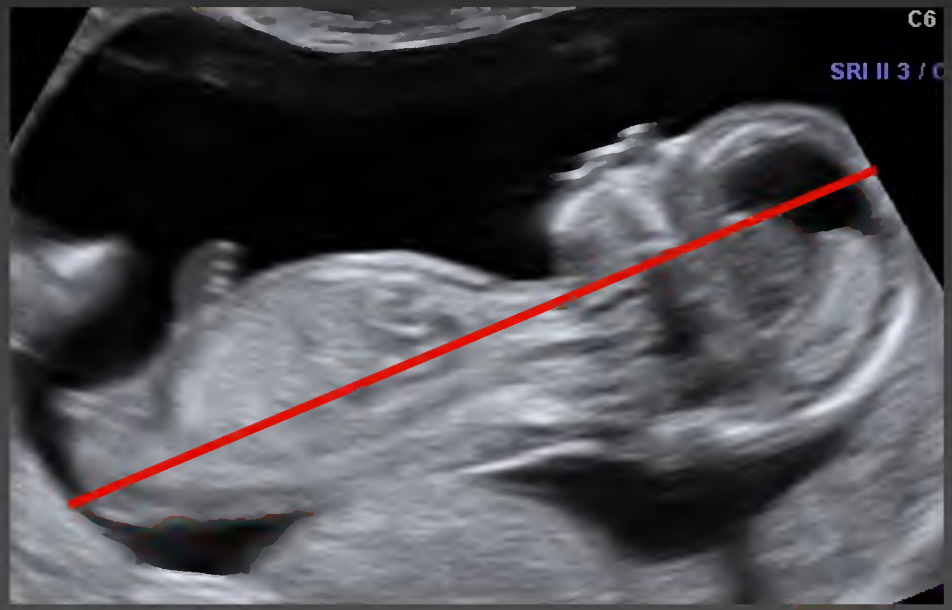
Anamnesi mestruale attendibile

- Non E/P da almeno due mesi
- Cicli regolari
- Non perdite ematiche anomale
- Ricorda le ultime due mestruazioni

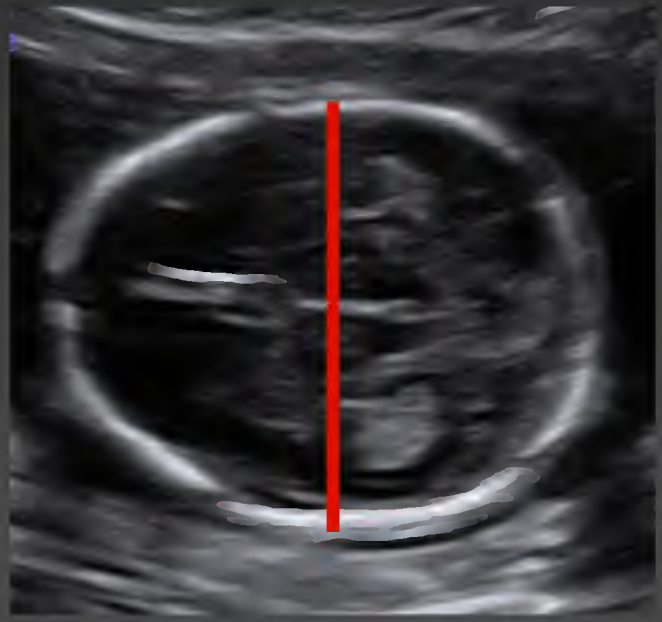
Datazione ecografica della gravidanza: premessa

Parametri ecografici per la datazione

Lunghezza vertice sacro (LVS)
< 14 settimane

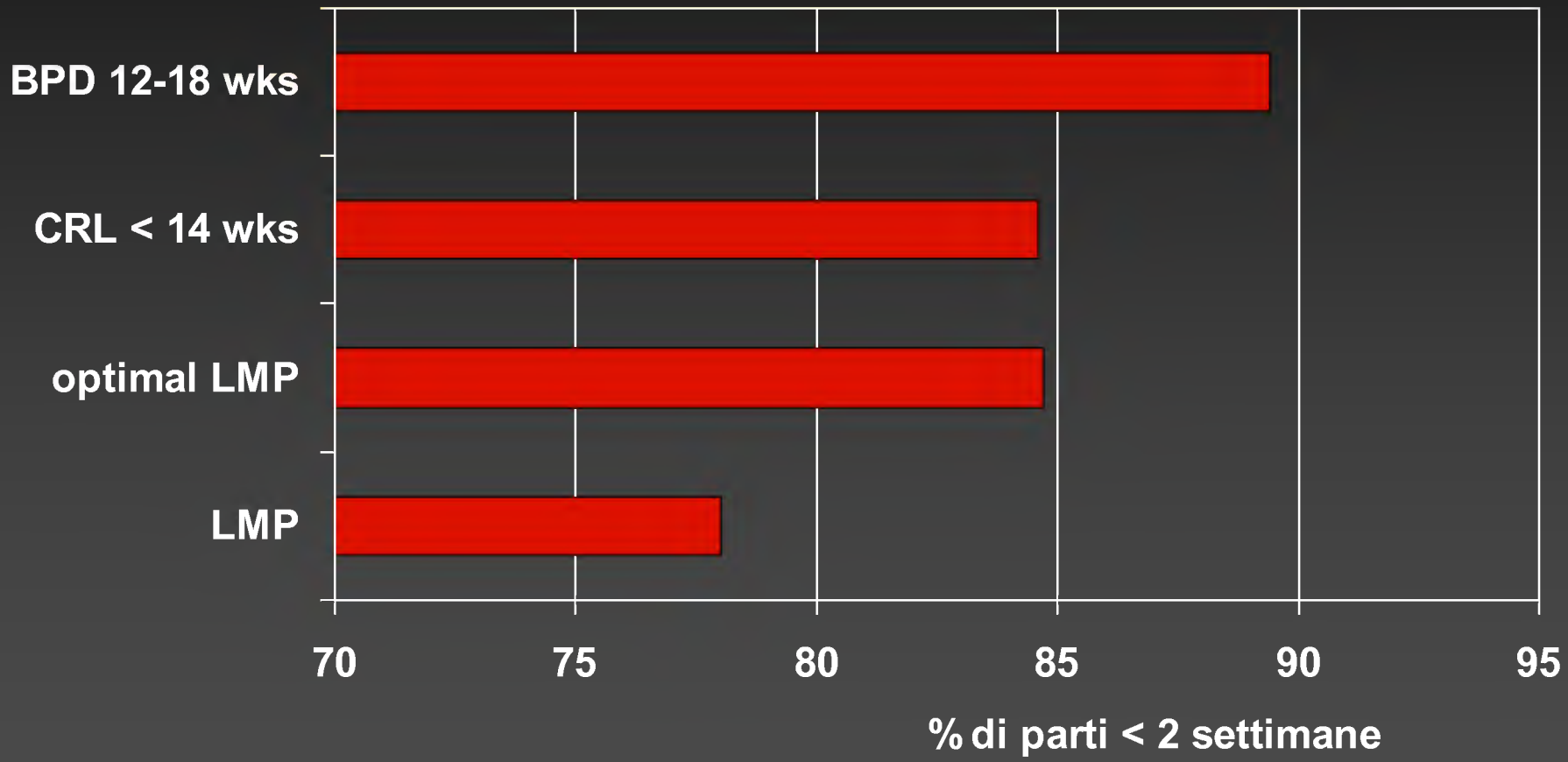


Diametro biparietale (DBP)
14-22 settimane



Datazione della gravidanza: quale è il metodo migliore?

Campbell et al: Ob Gyn 65:613, 1985

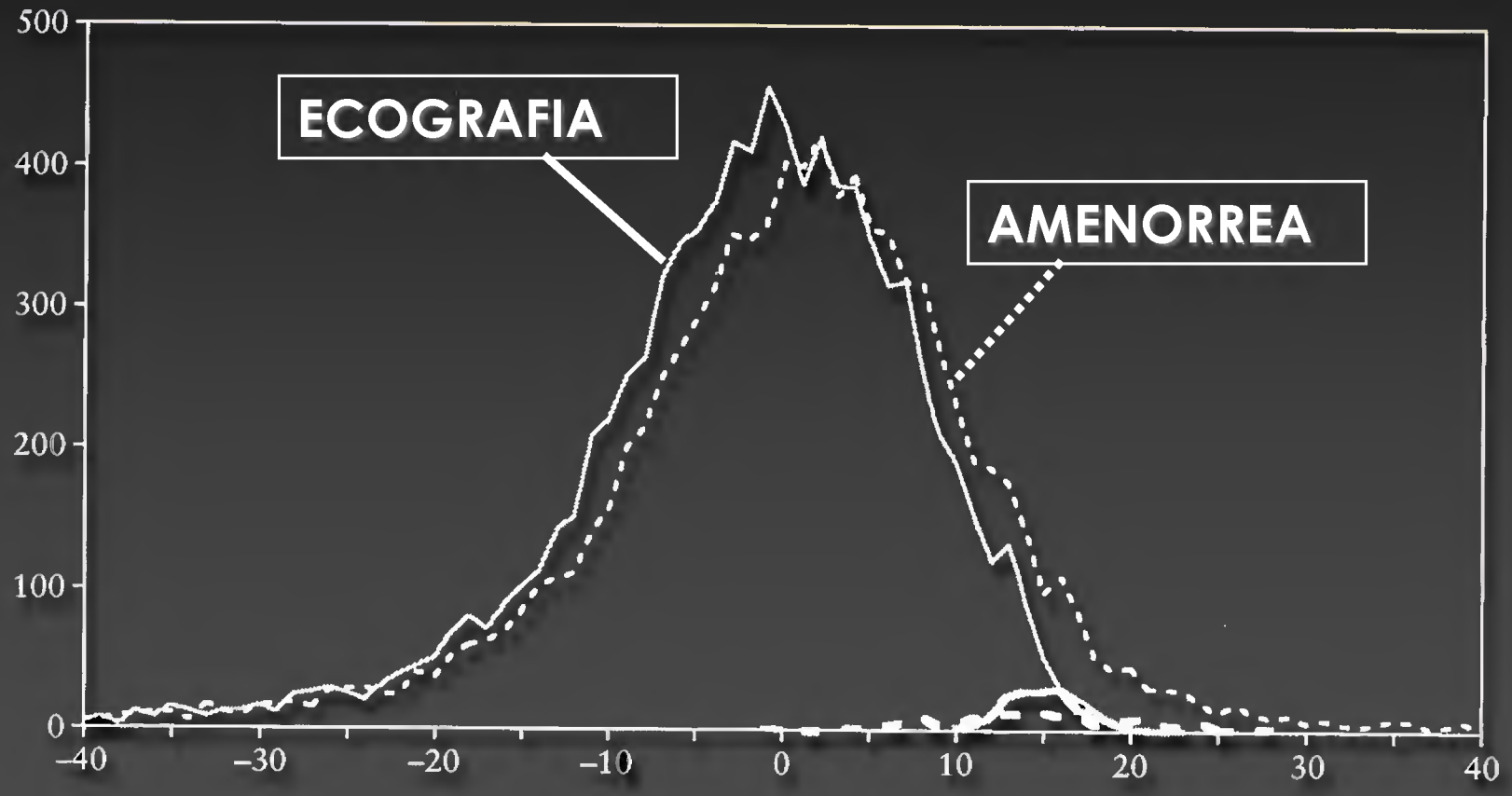


Ultime mestruazioni o biometria ecografica?

- Se la storia mestruale è buona, usare le ultime mestruazioni
- Se l'epoca mestruale è incerta, usare l'ecografia (< 22 settimane)
- Se l'epoca mestruale è buona, ma l'ecografia suggerisce una differenza > 7 giorni, usare l'ecografia
- ? Usare sempre e comunque l'ecografia

Predizione dell'epoca di parto in 15,000 pazienti

Tunon: Ultrasound Obstet Gynecol 8:178, 1996.



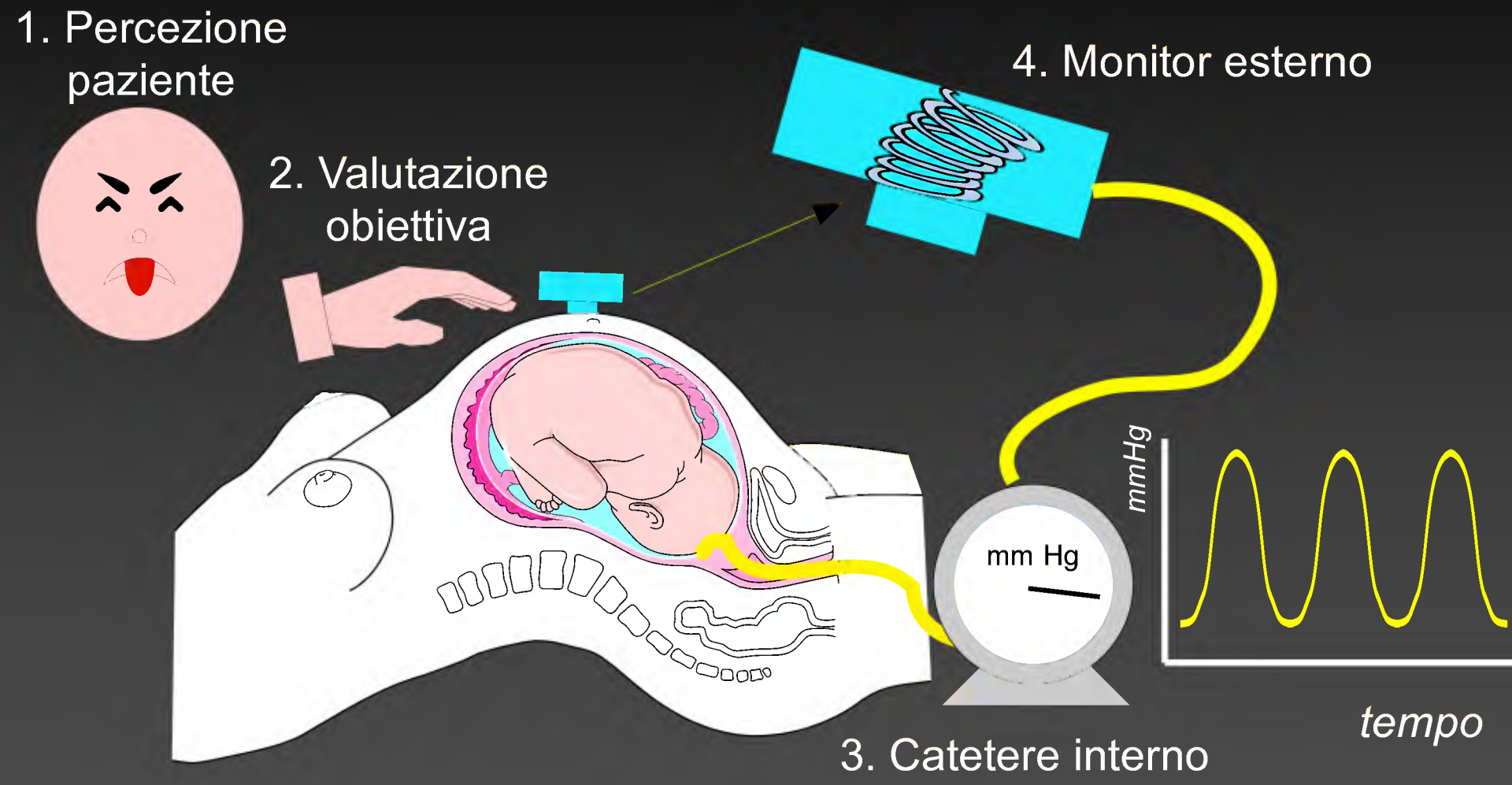
Datazione ecografica

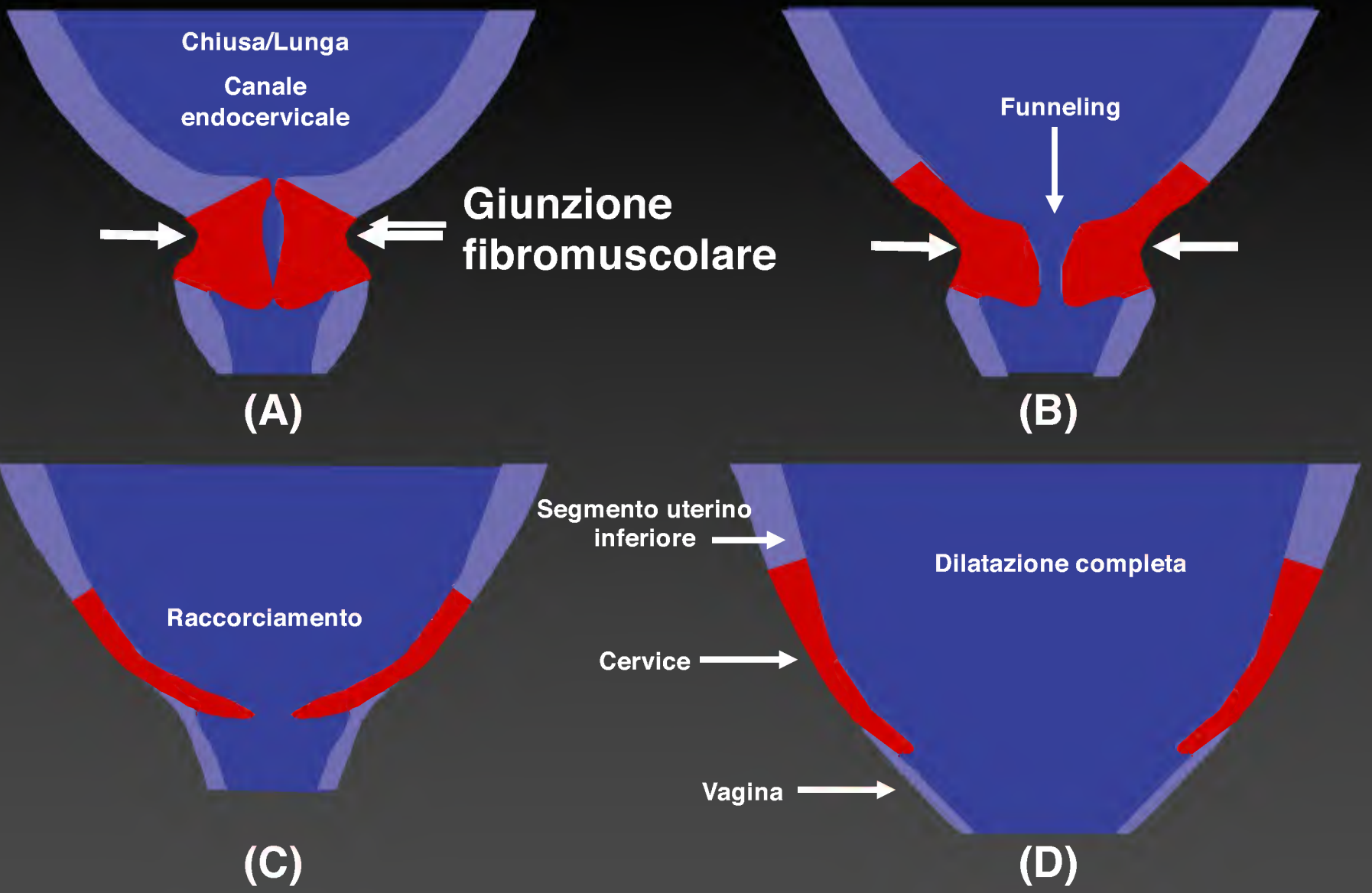
- Riduzione del numero di induzioni del parto per gravidanza protratta
- 8 studi, n=25,516
- RR: 0,59 (IC 95%: 0,42-0,83)

Diagnosi di travaglio di parto

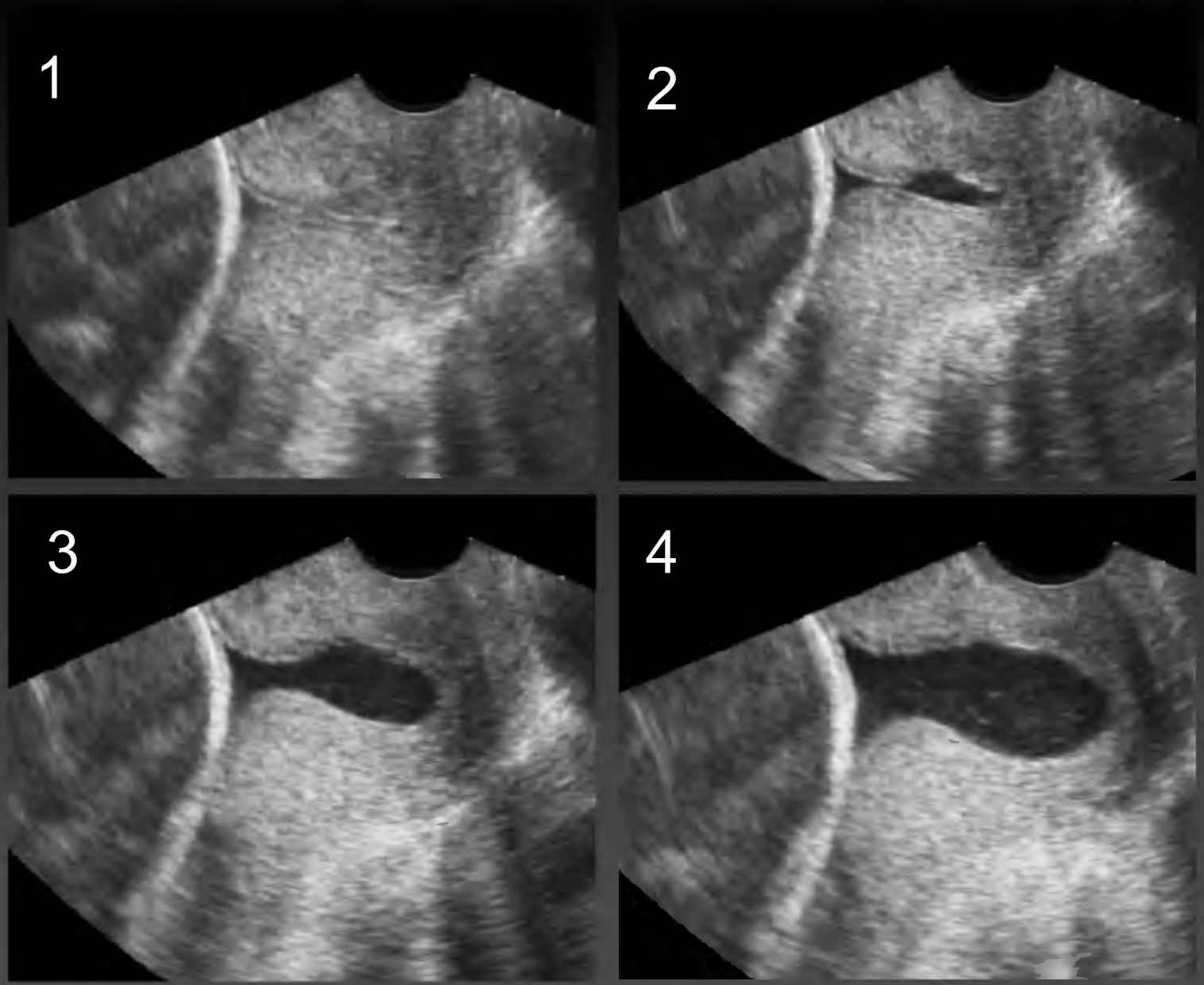
1. Contrazioni uterine
2. Dilatazione della cervice

Valutazione della attività contrattile



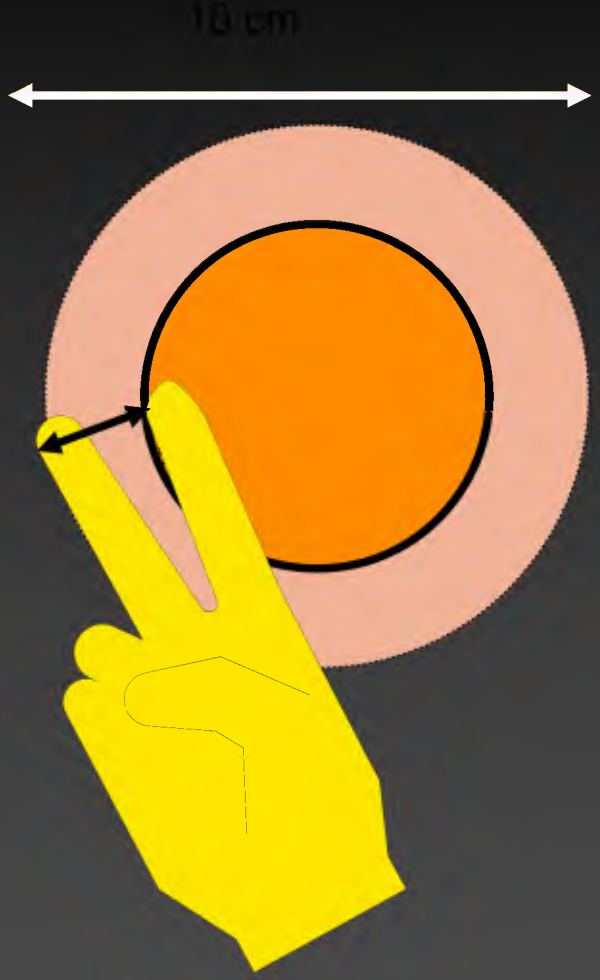


Danforth DN and Hendricks CH. Obstetrics and Gynecology. Harper & Row. 1977.


1
2
3
4

Valutazione della dilatazione cervicale

Dilatazione 4 cm



Dilatazione 10 – 3 = 7 cm

Gli stadi del parto

- Primo stadio: periodo dilatante
- Secondo stadio: periodo espulsivo
- Terzo stadio: secondamento

Perché è importante la diagnosi di travaglio di parto?

Perché è importante la diagnosi di travaglio?

- Il travaglio di parto richiede ricovero/assistenza continua
- Il travaglio di parto presenta spesso anomalie che possono trarre beneficio da interventi correttivi
- L'impiego di analgesia in travaglio si sta diffondendo anche in Italia
- Il travaglio di parto comporta un rischio di asfissia fetale e rende sempre necessario il controllo delle condizioni fetali

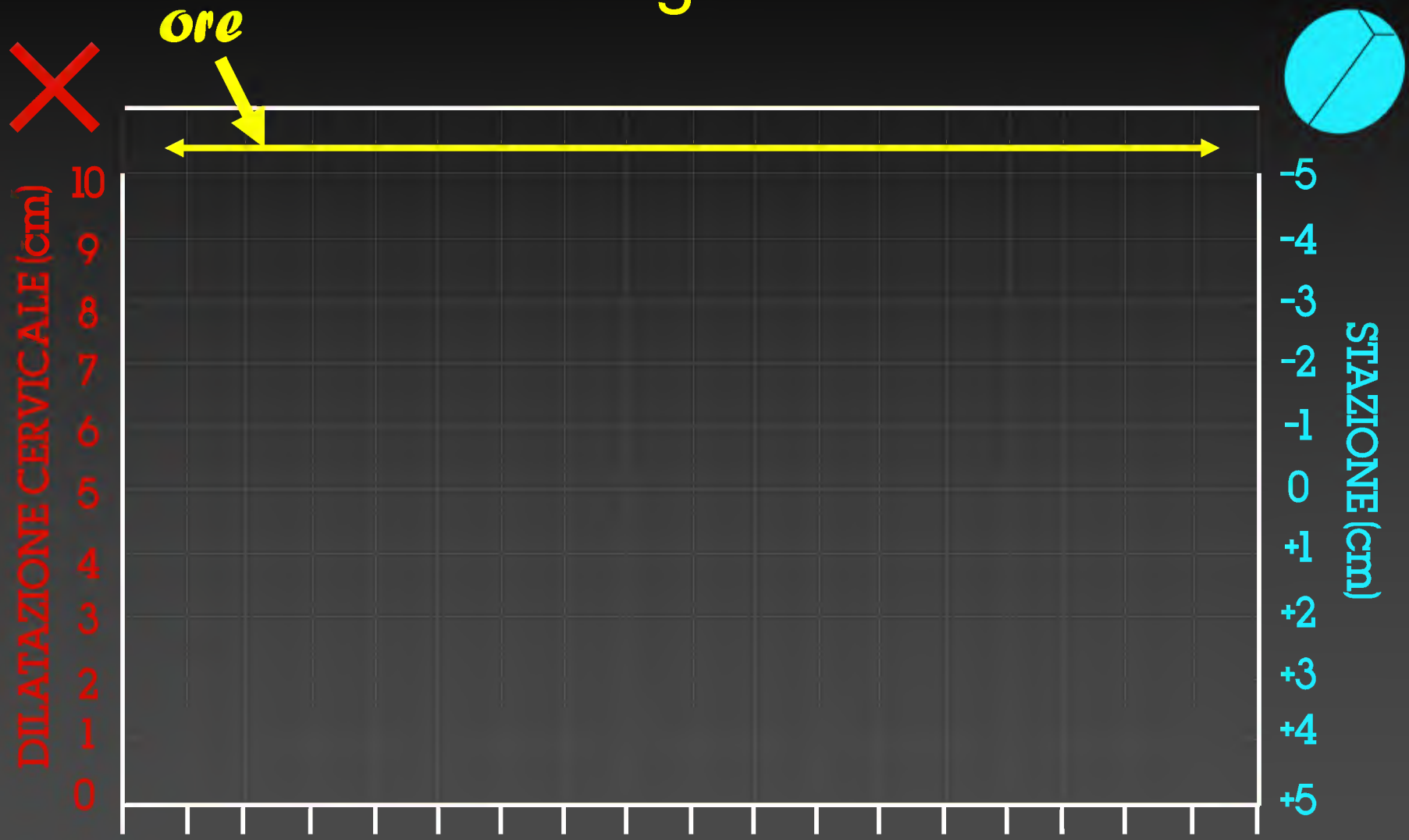
Diagnosi di travaglio

- Dilatazione cervicale progressiva + contrazioni uterine regolari (> 1 ogni 10 minuti, percepite come *dolorose*)
- Contrazioni senza dilatazione cervicale non implicano travaglio (*falso travaglio*)
- La rottura delle membrane non implica travaglio di parto
- Una dilatazione della cervice fino a 3-4 cm è fisiologica a termine di gravidanza; in questi casi due esami obiettivi a distanza di 1-2 ore sono necessari per dimostrare la progressione della dilatazione

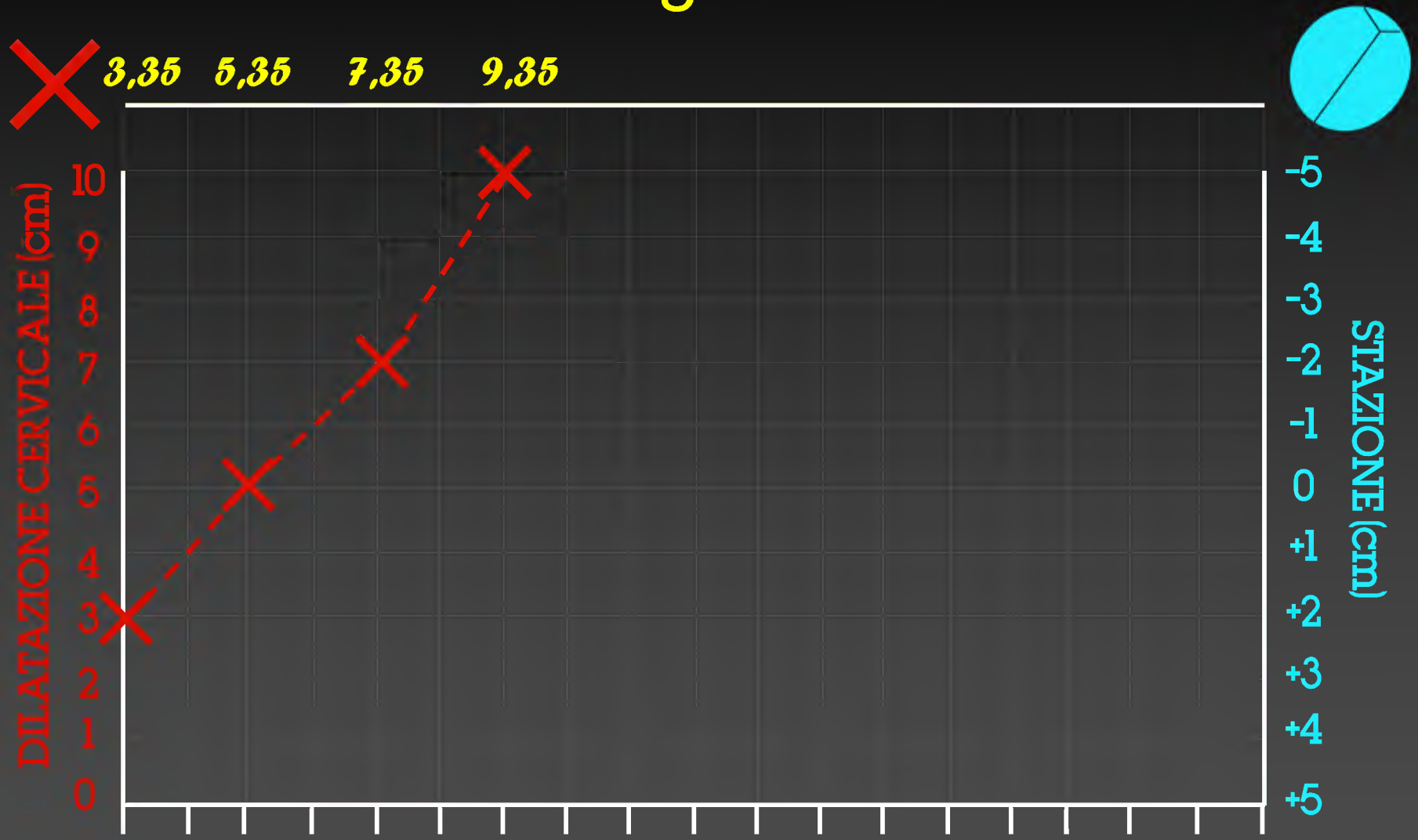
Contrazioni uterine e travaglio di parto

- Il travaglio di parto è caratterizzato da contrazioni uterine regolari ogni 3-5 minuti della durata di 1-2 minuti
- L'andamento delle contrazioni in travaglio è molto variabile
- Con gli strumenti disponibili non è possibile diagnosticare l'inizio né la regolare evoluzione del travaglio in base alla natura delle contrazioni uterine; la valutazione viene eseguita sulla base della dilatazione cervicale

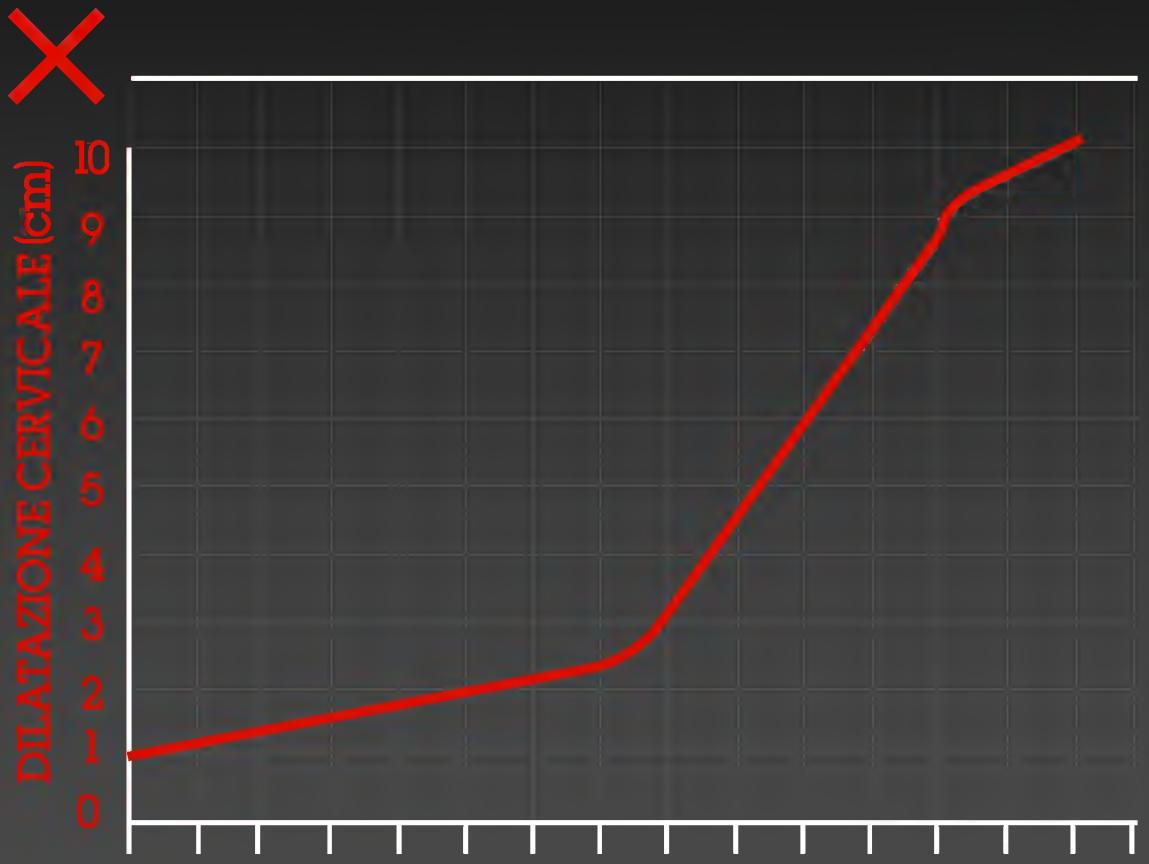
Partogramma



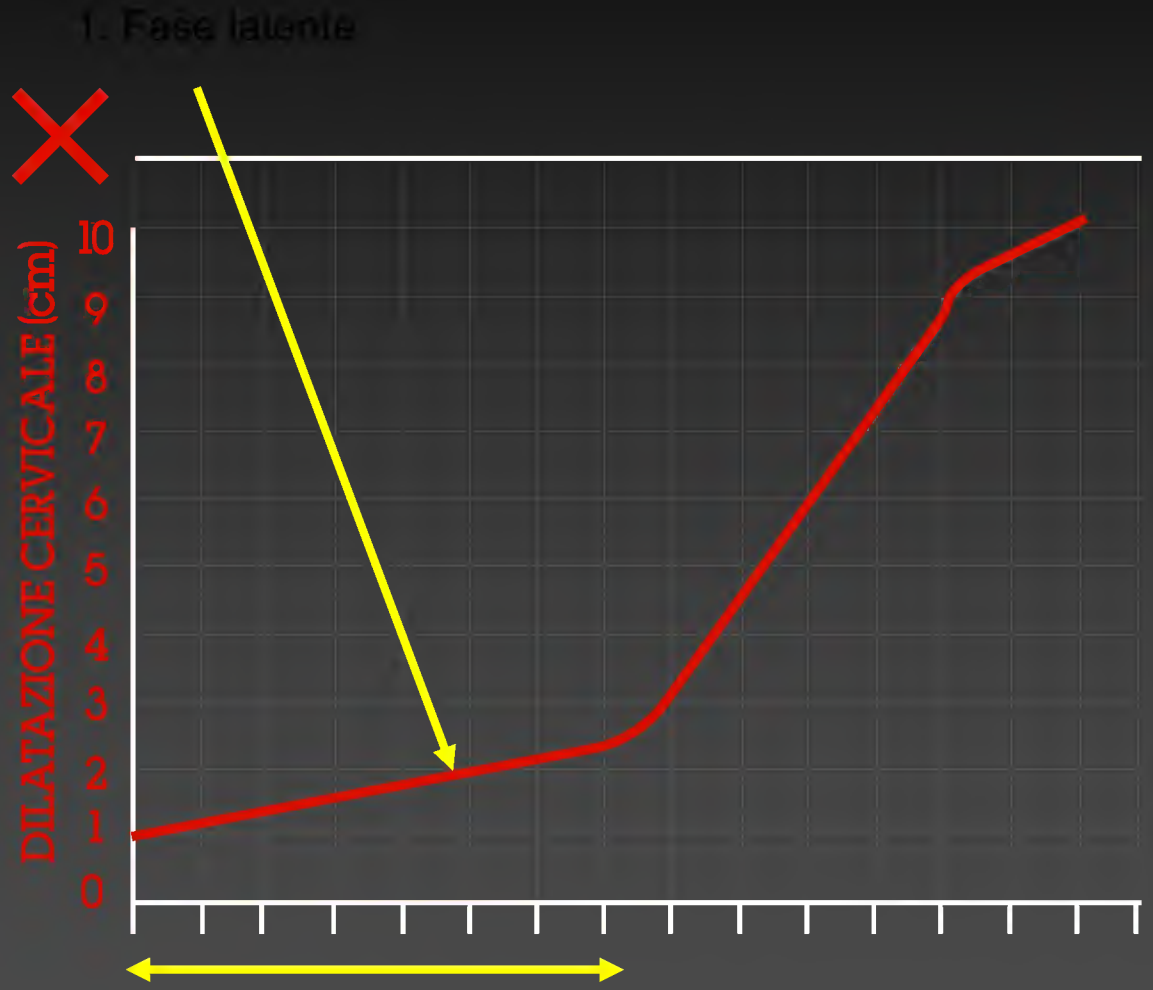
Partogramma



La curva cervicometrica di Friedman

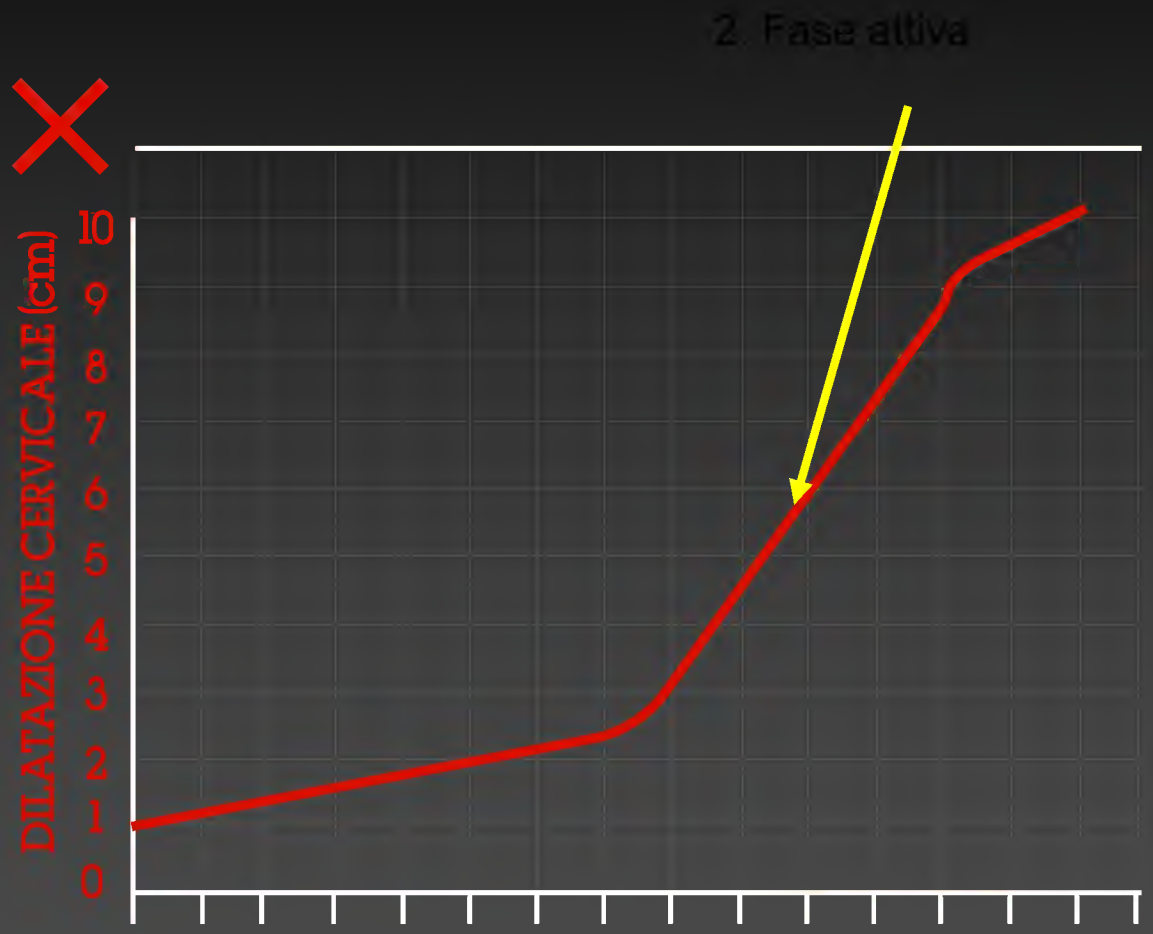


La curva cervicometrica di Friedman



1.Fase latente
Media 8 ore
< 20 ore (para 0)
< 14 ore (para +)

La curva cervicometrica di Friedman



2.Fase attiva

> 1,2 cm/hr (para 0)

> 1,5 cm/hr (para +)

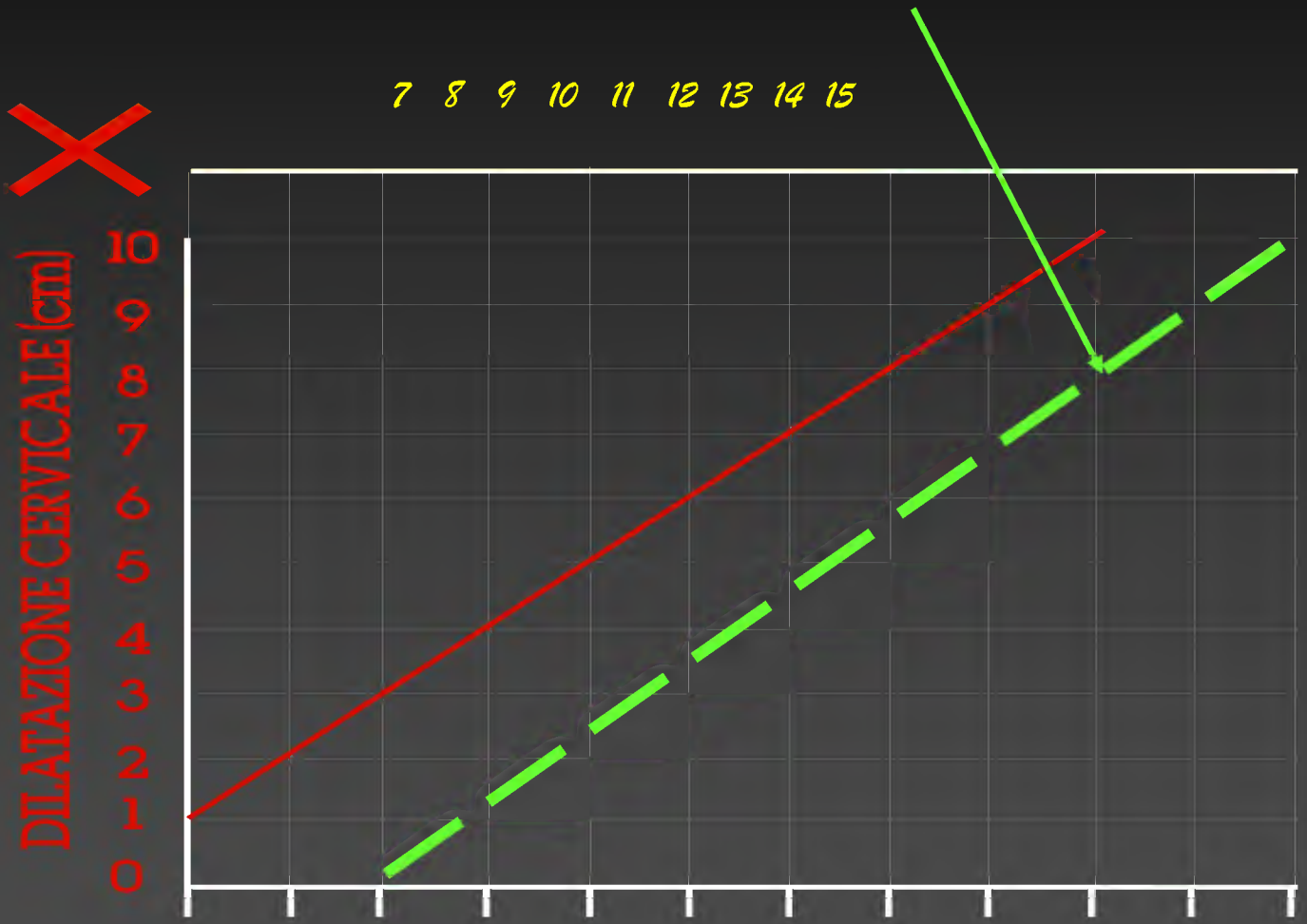
La curva cervicometrica di Friedman e il significato della fase latente

- La dilatazione della cervice è frequente a termine di gravidanza, prima del travaglio
- Il travaglio attivo viene definito da dilatazione > 3-5 cm con contrazioni regolari
- Dilatazione < 3-5 cm e contrazioni anche se regolari e dolorose (non importa quanto) non indicano necessariamente travaglio attivo
- La durata della fase latente non influisce sulla probabilità di una regolare evoluzione della fase attiva

Gli scostamenti dal partogramma ‘ideale’

- La linea di progressione indicata dai partogrammi indica l’evoluzione media di un parto
- Scostamenti anche significativi dalla linea delle medie sono compatibili con parti assolutamente fisiologici
- Non esiste un criterio assoluto per definire patologico uno scostamento; le azioni dipendono dal quadro clinico generale e dalla interazione con la paziente

Scostamento dal partogramma ideale: la linea di azione



Gestione delle pazienti in travaglio

- Alimentazione (leggera) consentita
- Favorire cambiamento di posizione e la deambulazione
- Il problema della posizione: conciliare comodità della paziente e controllo del feto
- Controllo del benessere fetale

L'utilizzo del CTG intrapartum migliora l'outcome fetale?

Cochrane Library
Cochrane Database of Systematic Reviews

Continuous cardiotocography (CTG) as a form of electronic fetal monitoring (EFM) for fetal assessment during labour (Review)

Alfirevic Z, Devane D, Gyte GM. Cochrane Database Syst Rev. 2017, 3

Non differenze significative in termini di:

- **Paralisi cerebrale**
  RR 1.75, 95% CI 0.84-3.63
- **Mortalità neonatale**
  RR 0.86, 95% CI 0.59-1.24
- **Parametri di benessere fetale**

CTG continuo in travaglio si associa a:

- ***Riduzione delle convulsioni neonatali***
  RR 0.50, CI 95% 0.31-0.80
- **Aumento del tasso di TC e parti operativi vaginali**
  ↑ CS: RR 1.63, 95% CI 1.29-2.07
  ↑ OVD: RR 1.15, 95% CI 1.01-1.33

"The real challenge is how best to convey this uncertainty to women to enable them to make an informed choice without compromising the normality of labour…"

Interpretazione del CTG a posteriori con esito noto

Knowledge of adverse neonatal outcome alters clinicians' interpretation of the intrapartum cardiotocograph

D Ayres-de-Campos,[a,b,c] D Arteiro,[b] C Costa-Santos,[d] J Bernardes[a,b,c]

BJOG 2011;118:978–984.

- 40 CTG analizzati da 5 ostetrici esperti secondo le linee guida FIGO
- I *round*: outcome neonatale non noto
- II *round*: stesso CTG + pH

- se pH<7.05 noto→ Interpretazione CTG più severa di *variabilità* e *decelerazioni*

	pH < 7.05 (20 tracings × 5 analyses × 2 rounds)			pH > 7.20 (20 tracings × 5 analyses × 2 rounds)		
	1st round (20 tracings × 5 analyses)	2nd round (20 tracings × 5 analyses)	*P*	1st round (20 tracings × 5 analyses)	2nd round (20 tracings × 5 analyses)	*P*
Normal	7	2	0.002‡	15	9	0.051‡
Suspicious	46	29		46	60	
Pathological	47	69		39	31	

"Case reviews involving CTG analysis should avoid the disclosure of neonatal outcome at the start, and observations should not be limited to cases with an adverse outcome…"

Differenze tra le linee guida: indicazioni CTG

ACOG:

- gravidanza fisiologica: CTG continuo o IA
- gravidanze ad alto rischio: CTG continuo

NICE:

- basso rischio: IA
- CTG continuo: fattori di rischio o fattori di rischio emergenti durante il travaglio
- CTG continuo da IA: riprendere IA se CTG normale dopo 20 minuti

FIGO:

- CTG continuo nelle gravidanze a rischio
- dati inconclusivi riguardo il monitoraggio CTG continuo versus IA

Abnormal findings on intermittent auscultation.

	Abnormal finding
Baseline	Below 110 bpm or above 160 bpm
Decelerations	Presence of repetitive or prolonged (>3 minutes) decelerations
Contractions	More than five contractions in a 10-minute period

FIGO Intrapartum Fetal Monitoring Expert Consensus Panel.Intermittent auscultation. Int J Gynecol Obstet 2015

Quale durata massima dovrebbe avere il periodo espulsivo?

- Classicamente, un periodo espulsivo > 2 ore deve essere valutato con attenzione
- Nella visione attuale, non esiste in pratica un limite superiore oltre il quale si debba intervenire se si registrano progressi e le condizioni del feto e della madre sono buone


PERIODO ESPULSIVO
FASE PASSIVA
Nessun premito
FASE ATTIVA
Premito

Second stage of labour
NICE, 2007

- Passive second stage of labour:
  - the finding of full dilatation of the cervix prior to or in the absence of involuntary expulsive contractions.
- Onset of the active second stage of labour:
  - the baby is visible
  - expulsive contractions with a finding of full dilatation of the cervix
  - active maternal effort following confirmation of full dilatation of the cervix in the absence of expulsive contractions

Sforzi espulsivi nel secondo stadio

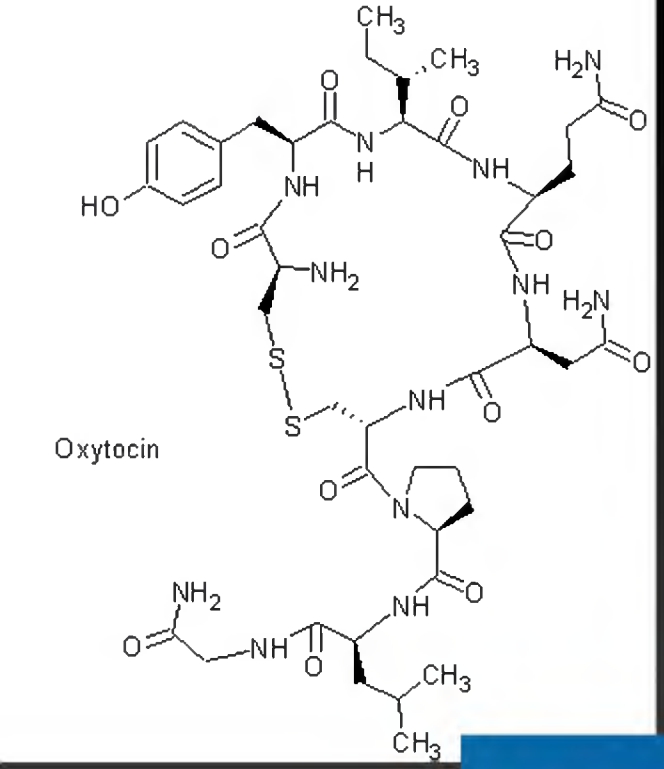
- Solo con la sensazione di premito
- Se dilatazione completa senza premito, rivalutare dopo 1 ora
- *Coaching* contro *no coaching* diminuzione della durata senza altri benefici
- Peggiori risultati con posizione supina

Limite superiore 2° stadio con epidurale
NICE, 2007

	PASSIVO	ATTIVO	TOTALE
Para 0	2 ore	3 ore	5 ore
Para 1 +	1 ore	2 ora	3 ore

2° stadio protratto (distocia)
RCOG, 2006

- Nessun progresso per:
  - Para 0 senza analgesia: 2 ore
  - Para 0 con analgesia: 3 ore
  - Para 1+ senza analgesia: 2 ore
  - Para 1+ con distocia: 1 ora


Oxytocin


50 ml
Oxytocin
FERRING - LECIVA
Oxytocin


NOVARTIS
Syntocinon®
Oxytocin.
5 I.E./U.I.

RCT of high dose (4.5 mUI/min) vs low dose (1.5 mUI/min) oxytocin for induction and augmentation

Merril & Zlatnik: Obstet Gynecol 94:455, 199)

- Induzione:
  - Minore durata del travaglio (2 h, p <.001)
  - Nessuna altra differenza (TC, esito)
- Potenziamento contrazioni
  - Minore durata del travaglio (1,3 h, p =0.03)
  - Nessuna altra differenza (TC, esito)

Oxytocin regimens from the Consortium of Safe Labour

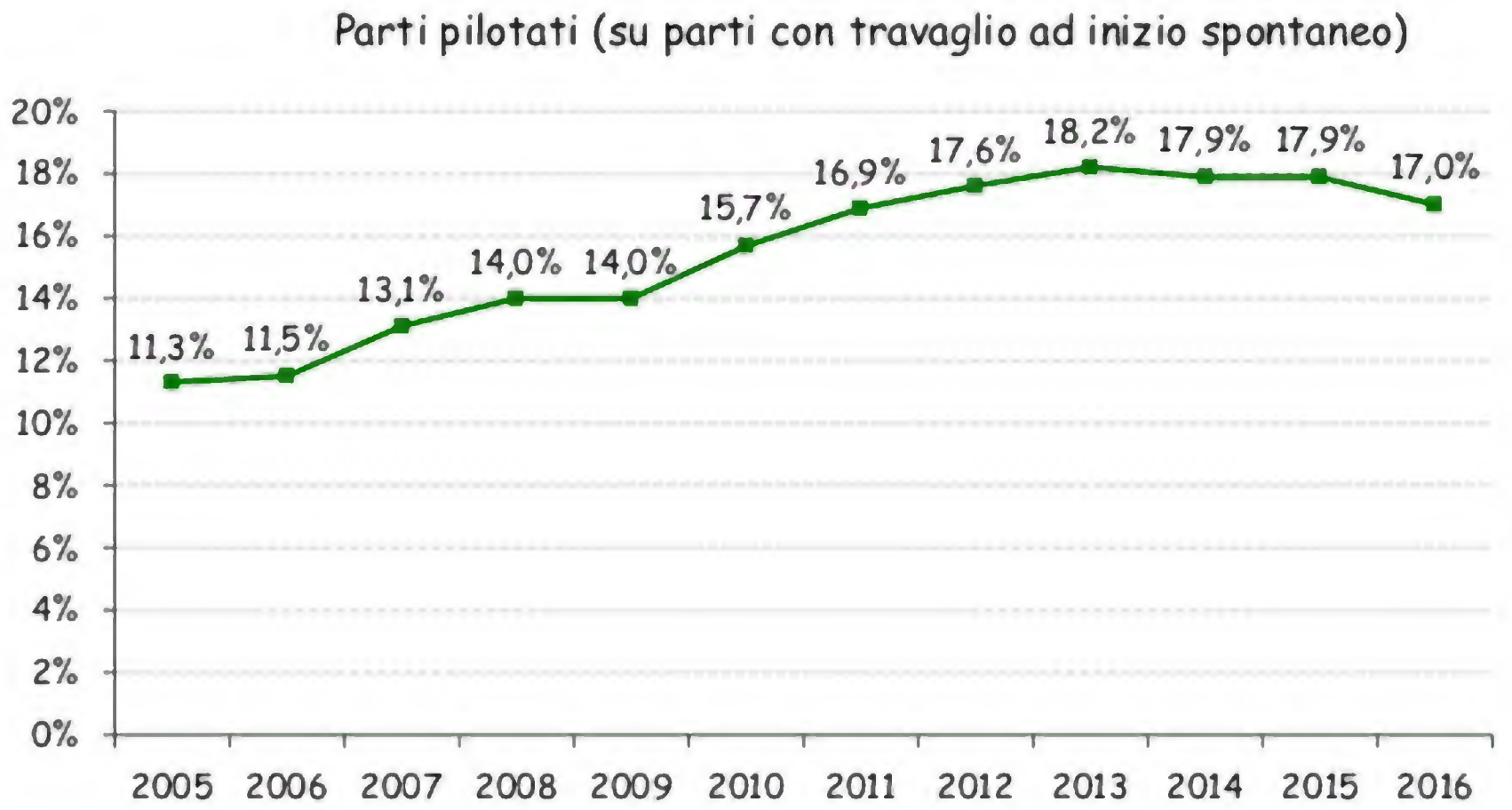
Zhang et al: Obstet Gynecol 118:249, 2011

- La somministrazione di ossitocina ad alta concentrazione riduce la durata del primo stadio senza influenzare il secondo stadio, il tasso di tagli cesarei e l'esito perinatale
- 2 mUI/ml: riduzione di 0,8 h (95% CI 0,5-1,1)
- 4 mUI/ml: riduzione di 1,3 h (95% CI 1-1,7)

Analgesia epidurale

- Prolunga la durata del 2° stadio (non del primo)*
- Aumenta la necessità di ossitocina*
- Aumenta la probabilità di parti operativi (non tagli cesarei)*
- La probabilità di parti operativi è diminuita se vengono ritardati gli sforzi espulsivi fino a che il premito è chiaramente avvertito**

*Howell: Cochrane Library, issue 3, 2000
**Bloom: AJOG 2006; 194:10



Induzione del travaglio Emilia-Romagna

CeDAP 2016

Table 2. Substandard care during labour and risk of an Apgar score of <7 at 5 minutes of age

	Cases *n* = 313		Controls *n* = 313		Odds ratios (95% CI)	
	n	%	*n*	%	Unadjusted	Adjusted*
Any substandard care during labour and risk of an Apgar of <7**						
No event of substandard care	118	37.7	202	64.5	1.0	1.0
Any event of substandard care	195	62.3	111	35.5	3.0 (2.1–4.1)	2.6 (1.8–3.8)
Intermittent CTG despite clear indication for continuous use						
Correct intervals of CTG	288	92.0	289	92.3	1.0	1.0
Intermittent despite indication for continuous use of CTG	25	8.0	24	7.7	1.0 (0.6–1.9)	1.0 (0.5–2.0)
Abnormal CTG before birth and risk of an Apgar of <7* **						
Normal CTG	67	21.4	207	66.1	1.0	1.0
Abnormal CTG, <45 minutes before birth	94	30.0	67	21.4	4.3 (2.9–6.6)	4.2 (2.6–6.8)
Abnormal CTG, 45–90 minutes before birth	65	20.8	23	7.3	8.7 (5.0–15.1)	7.6 (4.0–13.9)
Abnormal CTG, ≥90 minutes before birth	87	27.8	16	5.1	16.8 (9.2–30.6)	15.1 (7.6–30.1)

Berglund S. BJOG 2010;117:968–978

Indication for fetal blood sampling (FBS) and risk of an Apgar of <7						
No indication for FBS	157	50.2	279	89.1	1.0	1.0
FBS when indicated**** performed	33	10.5	7	2.2	8.4 (3.6–19.4)	7.3 (3.0–17.9)
FBS when indicated**** not performed	123	39.3	27	8.6	8.1 (5.1–12.8)	7.2 (4.3–12.0)
Use of oxytocin, signs of uterine inertia, hyperstimulation of contractions and risk of an Apgar of <7						
No oxytocin	67	21.4	151	48.3	1.0	1.0
Oxytocin						
No hyperstimulation,***** no inertia	22	7.1	31	10.1	1.6 (0.9–3.0)	0.9 (0.4–1.9)
No hyperstimulation, inertia	83	26.9	59	19.2	3.2 (2.0–4.9)	1.8 (1.0–3.2)
Hyperstimulation,***** no inertia	26	8.4	12	3.9	4.9 (2.3–10.2)	3.4 (1.4–7.8)
Hyperstimulation,****** inertia	63	20.4	15	4.9	9.5 (5.0–17.8)	5.5 (2.6–12.0)
No registration of contractions, no inertia	24	7.8	25	8.0	2.2 (1.2–4.1)	1.8 (0.9–3.6)
No registration of contractions, inertia	28	9.1	20	6.5	3.2 (1.7–6.0)	2.1 (1.0–4.4)
Increase of intravenous oxytocin despite abnormal CTG and risk of an Apgar of <7						
No	255	81.5	295	94.2	1.0	1.0
Yes	58	18.5	18	5.8	3.7 (2.1–6.4)	3.3 (1.8–6.0)

Berglund S. BJOG 2010;117:968–978

	Cases *n* = 313		Controls *n* = 313		Odds ratios (95% CI)	
	n	%	*n*	%	Unadjusted	Adjusted*
Imminent asphyxia and decision to deliver interval						
No Imminent asphyxia	120	38.3	266	85.0	1.0	1.0
Birth within 30 minutes**	132	42.2	28	8.9	10.5 (6.6–16.6)	8.5 (5.0–14.3)
Birth after 30 minutes**	42	13.4	11	3.5	8.5 (4.2–17.0)	5.4 (2.4–11.8)
Point of time not noted	19	6.1	8	2.6	5.3 (2.2–12.4)	5.0 (1.9–13.2)
Spontaneous vaginal delivery and risk of an Apgar of <7 in relation to abnormal CTG						
Normal CTG	44	14.1	185	59.1	1.0	1.0
Abnormal for ≤45 minutes	39	12.5	61	19.5	2.7 (1.6–4.5)	2.6 (1.4–4.8)
Abnormalfor >45 minutes	41	13.1	23	7.3	7.5 (4.1–13.8)	7.2 (3.6–14.7)
Not spontaneous vaginal	189	60.4	44	14.1		
Complex instrumental delivery* **						
No	284	90.7	313	100	1.0	1.0
Yes	29	9.3	0	0	25.4 (6.1–106.)	17.7 (4.1–77.1)

Berglund S. BJOG 2010;117:968–978

The American College of Obstetricians and Gynecologists
WOMEN'S HEALTH CARE PHYSICIANS

Society for Maternal·Fetal Medicine

OBSTETRIC CARE CONSENSUS

Number 1 · March 2014
(Reaffirmed 2016)

Safe Prevention of the Primary Cesarean Delivery

Raccomandazioni

First stage of labor	
A prolonged latent phase (eg, greater than 20 hours in nulliparous women and greater than 14 hours in multiparous women) should not be an indication for cesarean delivery.	1B Strong recommendation, moderate quality evidence
Slow but progressive labor in the first stage of labor should not be an indication for cesarean delivery.	1B Strong recommendation, moderate quality evidence
Cervical dilation of 6 cm should be considered the threshold for the active phase of most women in labor. Thus, before 6 cm of dilation is achieved, standards of active phase progress should not be applied.	1B Strong recommendation, moderate quality evidence
Cesarean delivery for active phase arrest in the first stage of labor should be reserved for women at or beyond 6 cm of dilation with ruptured membranes who fail to progress despite 4 hours of adequate uterine activity, or at least 6 hours of oxytocin administration with inadequate uterine activity and no cervical change.	1B Strong recommendation, moderate quality evidence

Raccomandazioni

First stage o

A prolonged
than 14 hour

Slow but pro
cesarean del

Cervical dila
most women
phase progre

Cesarean de
for women a
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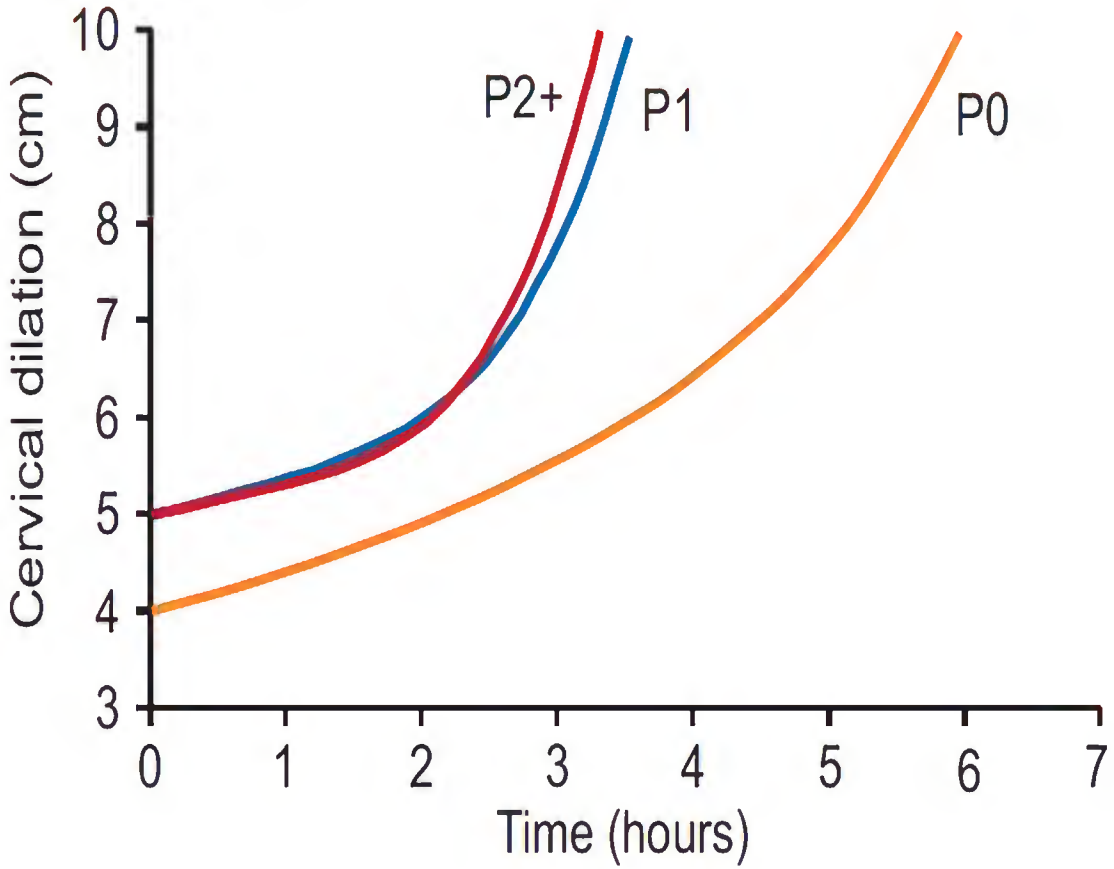
Box 1. Definition of Arrest of Labor in the First Stage

Spontaneous labor: More than or equal to 6 cm dilation with membrane rupture and one of the following:

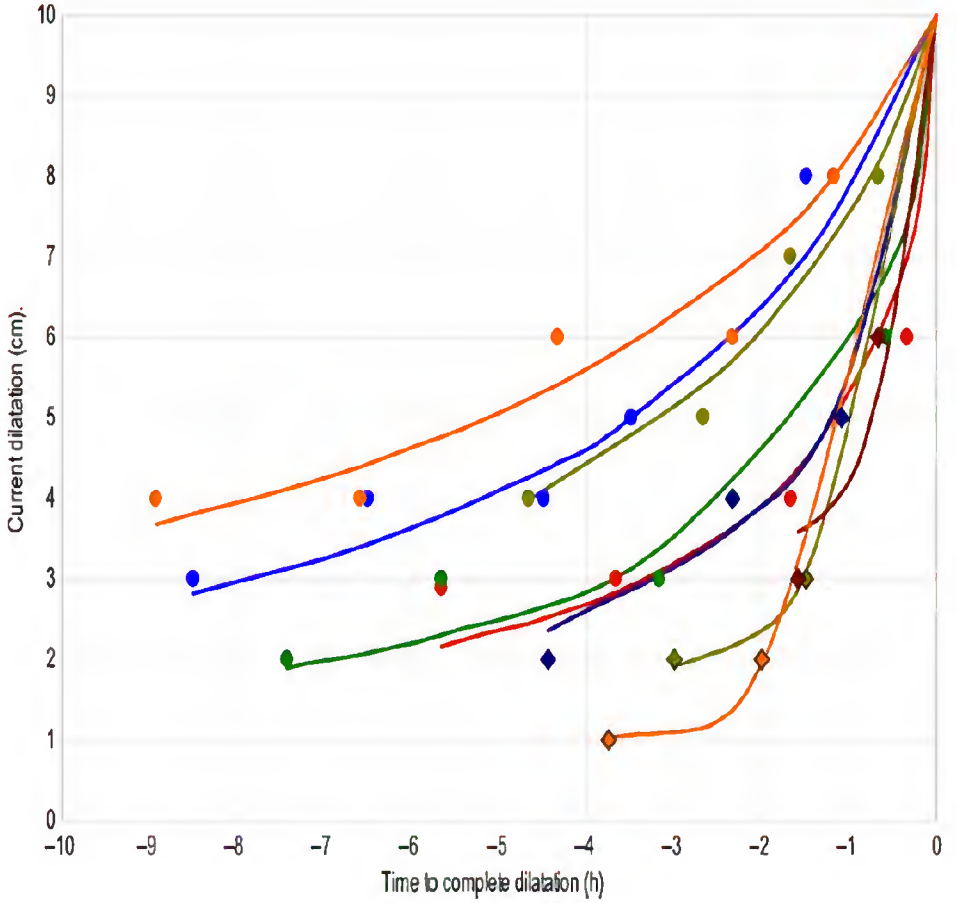
- 4 hours or more of adequate contractions (eg, more than 200 Montevideo units)
- 6 hours or more of inadequate contractions and no cervical change

Durata periodo dilatante



Zhang J. Obstet Gynecol 2010;116:1281–7.

Durata periodo dilatante



Ferrazzi E. Acta Obstet Gynecol Scand 2015; 94:1136–1144.

Raccomandazioni

Second stage of labor	
A specific absolute maximum length of time spent in the second stage of labor beyond which all women should undergo operative delivery has not been identified.	1C Strong recommendation, low quality evidence
Before diagnosing arrest of labor in the second stage, if the maternal and fetal conditions permit, allow for the following: • At least 2 hours of pushing in multiparous women (1B) • At least 3 hours of pushing in nulliparous women (1B) Longer durations may be appropriate on an individualized basis (eg, with the use of epidural analgesia or with fetal malposition) as long as progress is being documented. (1B)	1B Strong recommendation, moderate quality evidence
Operative vaginal delivery in the second stage of labor by experienced and well trained physicians should be considered a safe, acceptable alternative to cesarean delivery. Training in, and ongoing maintenance of, practical skills related to operative vaginal delivery should be encouraged.	1B Strong recommendation, moderate quality evidence
Manual rotation of the fetal occiput in the setting of fetal malposition in the second stage of labor is a reasonable intervention to consider before moving to operative vaginal delivery or cesarean delivery. In order to safely prevent cesarean deliveries in the setting of malposition, it is important to assess the fetal position in the second stage of labor, particularly in the setting of abnormal fetal descent.	1B Strong recommendation, moderate quality evidence

Misguided guidelines for managing labor

Wayne R. Cohen, MD; Emanuel A. Friedman, MD, Med ScD

OBSTETRICS

Perils of the new labor management guidelines

Wayne R. Cohen, MD; Emanuel A. Friedman, Med ScD

OBSTETRICS

Second-stage labor: how long is too long?

Kenneth J. Leveno, MD; David B. Nelson, MD; Donald D. McIntire, PhD

Reports from 2004 through 2014 on infant complications for births to nulliparous women with second-stage labor ≤3 hours compared to births >3 hours

Study	No. of women reaching second stage	No. of women with second stage >3 h	Unadjusted infant complications ≤3 h vs >3 h	Adjusted[a] infant complications ≤3 h vs >3 h
Cheng et al,[16] 2004	15,759	2909 (19%)	Not reported	No difference
Le Ray et al,[17] 2009	1862	244 (13%)	Increased Infant trauma and neonatal intensive care	No difference
Rouse et al,[18] 2009	4126	360 (9%)	Increased pH <7.0, stillbirth, and neonatal death	No difference
Allen et al,[19] 2009	55,936	9314 (17%)	Increased HIE, resuscitation at birth, and admission to intensive care	Not done
Laughon et al,[20] 2014	32,124[b]	3533 (10%)	Increased 5-min Apgar <4, asphyxia, and admission to intensive care	Not done

Leveno KJ. Am J Obstet Gynecol 2016;214:484-489.

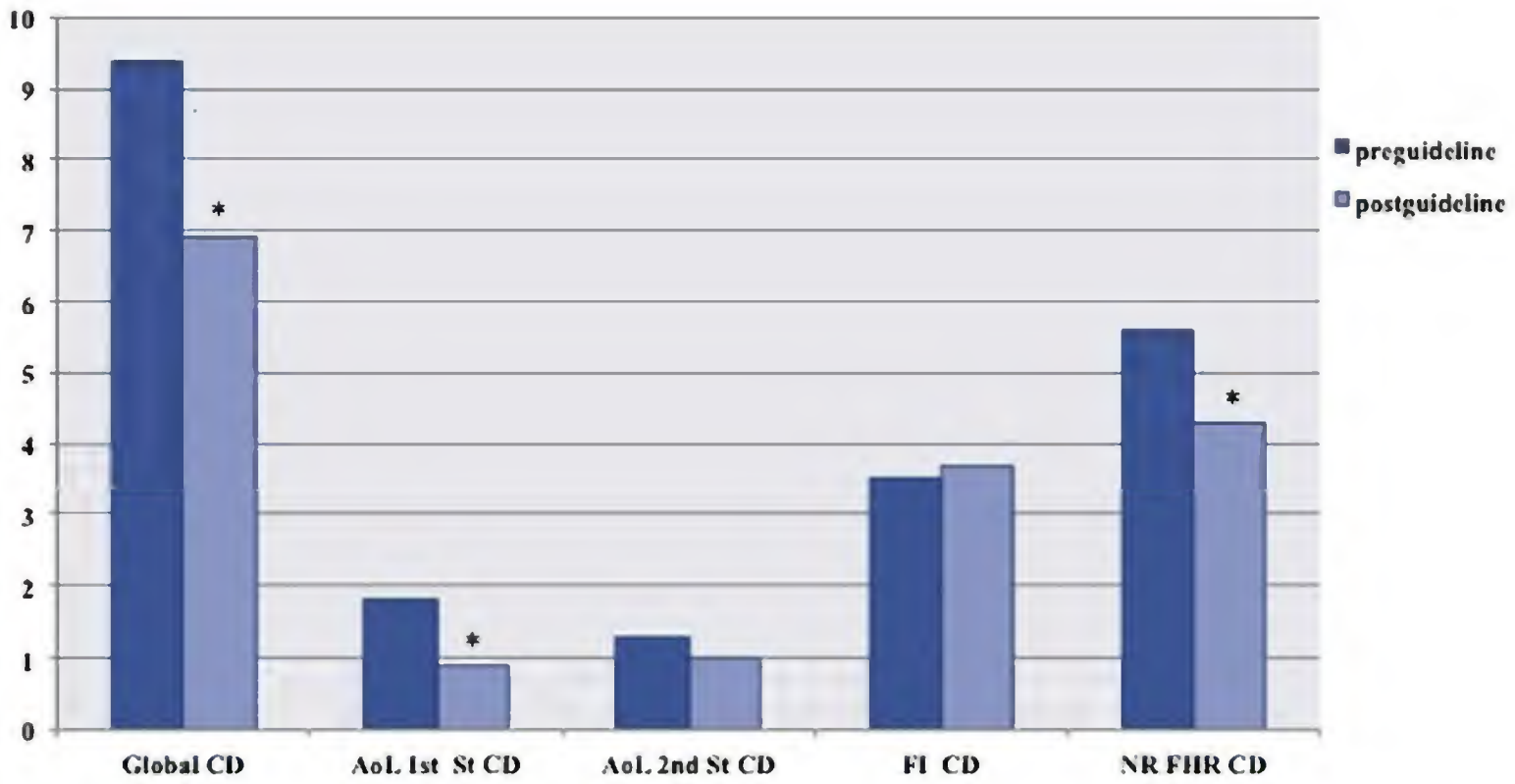
Obstetric Outcome	Duration of Active Pushing (min)					
	Nulliparous					
	Less Than 60 (n=15,148)	60–119 (n=6,613)	120–179 (n=2,796)	180–239 (n=1,011)	240 or Greater (n=460)	*P**
Maternal						
Route of delivery						<.001
Cesarean	447 (3.0)	543 (8.2)	499 (17.9)	245 (24.2)	103 (22.4)	
OVD	1,201 (7.9)	881 (13.3)	768 (27.5)	355 (35.1)	151 (32.8)	
SVD	13,500 (89.1)	5,189 (78.5)	1,528 (54.7)	411 (40.7)	206 (44.8)	
PPH	150 (1.0)	87 (1.4)	68 (2.5)	37 (3.7)	15 (3.3)	<.001
3rd- or 4th-degree laceration	752 (5.0)	563 (8.5)	391 (14.0)	154 (15.3)	75 (16.3)	<.001
Neonatal						
CAO	193 (1.3)	97 (1.5)	61 (2.2)	26 (2.6)	11 (2.4)	<.001
Mechanical ventilation 1 d or greater	80 (0.5)	43 (0.7)	21 (0.8)	4 (0.4)	3 (0.7)	.39
Confirmed sepsis	23 (0.2)	7 (0.1)	3 (0.1)	1 (0.1)	0	.25
Brachial plexus palsy	16 (0.1)	9 (0.1)	8 (0.3)	5 (0.5)	0	.009
Fracture						
Clavicular	39 (0.3)	12 (0.2)	10 (0.4)	4 (0.4)	0	.86
Skull	1 (0.0)	2 (0.0)	1 (0.0)	2 (0.2)	0	.009
Other	0	3 (0.1)	2 (0.1)	3 (0.3)	0	<.001
Seizure	18 (0.1)	12 (0.2)	13 (0.5)	3 (0.3)	5 (1.1)	<.001
HIE	51 (0.3)	25 (0.4)	15 (0.6)	8 (0.8)	5 (1.1)	.001
Death	1 (0.0)	0	0	0	0	.49

OVD, operative vaginal delivery; SVD, spontaneous vaginal delivery; PPH, postpartum hemorrhage; CAO, composite adverse outcome; HIE, hypoxic–ischemic encephalopathy.

Grobman WA. Obstet Gynecol. 2016;12:667-73.

Obstetric Outcome	Duration of Active Pushing (min)*	
	60–119	120–179
Cesarean†	14.1 (10.6–18.9)	44.4 (32.4–60.9)
OVD†	4.4 (3.6–5.4)	8.2 (6.3–10.6)
PPH	2.2 (1.3–3.8)	5.6 (3.2–9.6)
3rd- or 4th-degree laceration	3.1 (2.1–4.4)	5.5 (3.5–8.6)
CAO	1.8 (1.2–2.9)	2.7 (1.5–4.8)

Grobman WA. Obstet Gynecol. 2016;12:667-73.



Asterisk indicates a value of $P < .001$.

AoL, arrest of labor; *CD*, desarean delivery; *FI*, failed induction; *NR FHR*, nonreassuring fetal heart rate; *1 st*, first stage of labor; *2 st*, second stage of labor.

Thuillier C. Am J Obstet Gynecol 2018;218:341.e1-341.e9.

Maternal and neonatal morbidity during the 2 periods

	Variable	Preguideline period	Postguideline period	OR	*P*
Maternal	Operative vaginal delivery rate, %, n/N	19.5 (581/2975)	17.2 (492/2857)	0.85 [0.74-0.98]	.02
	Third and fourth perineal laceration rate, %, n/N	1.6 (48/2975)	1.3 (37/2857)	0.80 [0.50-1.25]	.32
	Postpartum hemorrhage, %, n	4.6 (151/3283)	5.3 (164/3068)	1.17 [0.92-1.47]	.18
Neonatal	1 minute Apgar score <7, %, n	8.4 (276/3283)	6.9 (212/3068)	0.80 [0.66-0.97]	.02
	5 minute Apgar score <7, %, n	1.3 (42/3283)	1.1 (34/3068)	0.88 [0.54-1.43]	.60
	Umbilical pH <7.10, %, n	2.4 (78/3283)	1.9 (59/3068)	0.80 [0.56-1.14]	.20
	Transfer to neonatal intensive care unit, %, n	1.6 (52/3283)	1.6 (50/3068)	1.02 [0.68-1.52]	.90
	Neonatal mortality	0	0	—	—

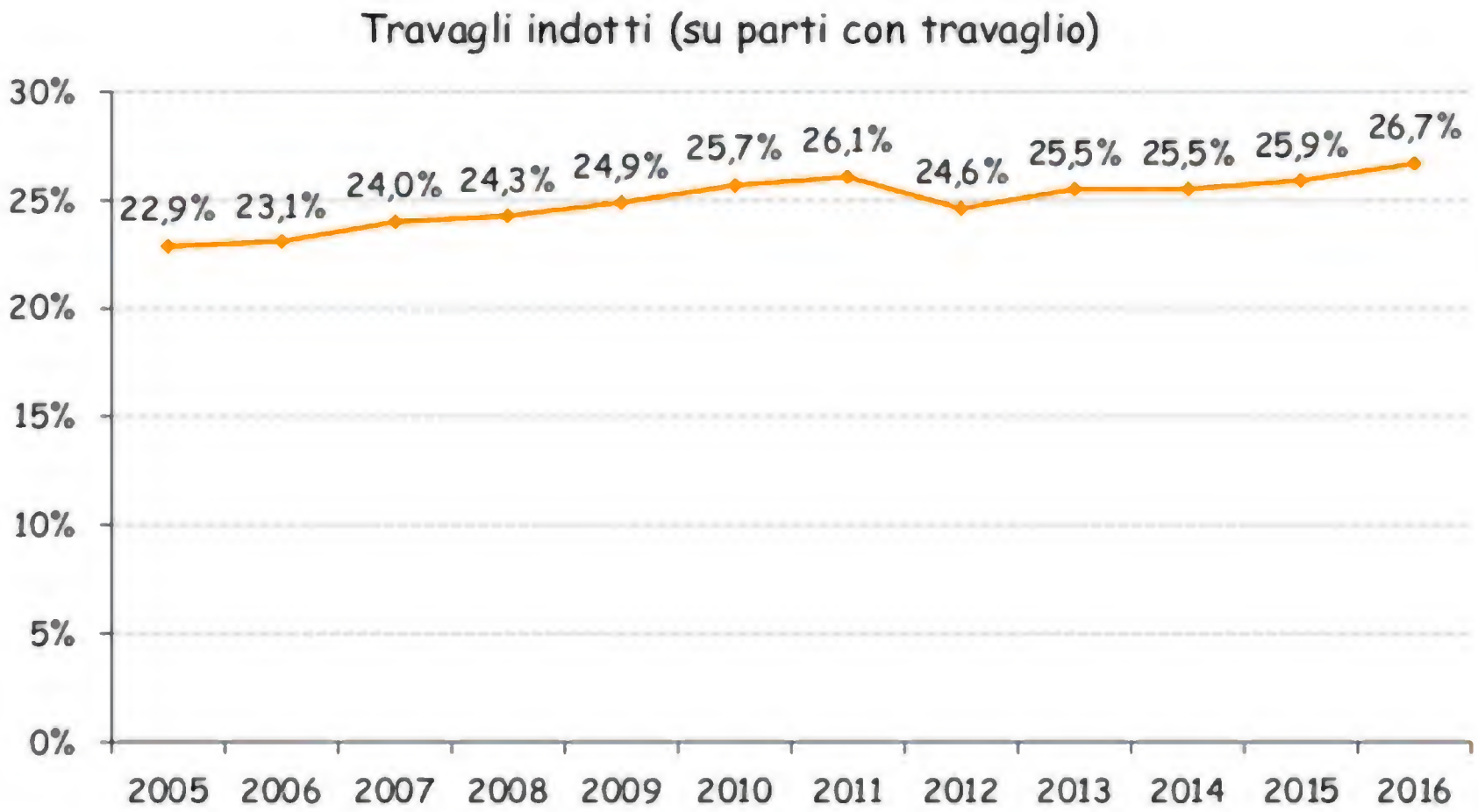
Thuillier C. Am J Obstet Gynecol 2018;218:341.e1-341.e9.

Induzione del travaglio in Italia

CeDAP 2015

Tabella 33 - Distribuzione regionale dei parti secondo la modalità del travaglio

Regione	Modalità del travaglio				Totale parti senza cesareo d'elezione	% non indicato/errato
	Spontaneo		*Indotto*			
	v.a.	*%*	*v.a.*	*%*		
Piemonte	16.736	68,4	7.749	31,6	24.485	0,0
Valle d'Aosta	608	78,0	171	22,0	842	7,5
Lombardia	51.563	73,9	18.218	26,1	70.576	1,1
Prov. Auton. Bolzano	3.778	77,4	1100	22,6	4.878	0,0
Prov. Auton. Trento	2.858	77,6	826	22,4	3.684	0,0
Veneto	23.575	74,9	7.902	25,1	32.520	3,2
Friuli Venezia Giulia	5.612	76,6	1.719	23,4	7.740	5,3
Liguria	6.088	81,0	1.429	19,0	7.746	3,0
Emilia Romagna	21.503	75,0	7.165	25,0	28.668	0,0
Toscana	17.302	76,3	5.366	23,7	24.054	5,8
Umbria	4.457	79,0	1.188	21,0	5.811	2,9
Marche	5.898	71,1	2.403	28,9	8.911	6,8
Lazio	25.980	94,5	1.519	5,5	37.529	26,7
Abruzzo	5.701	75,3	1.869	24,7	7.784	2,7
Molise	995	71,1	405	28,9	1.400	0,0
Campania	26.590	94,2	1.628	5,8	30.065	6,1
Puglia	18.411	83,8	3.563	16,2	22.920	4,1
Basilicata	2.518	78,8	676	21,2	3.239	1,4
Calabria	10.306	87,7	1.450	12,3	11.785	0,2
Sicilia	23.956	76,8	7.227	23,2	31.183	0,0
Sardegna	5.653	69,4	2.495	30,6	8.148	0,0
Totale	**280.088**	**78,6**	**76.068**	**21,4**	**373.968**	**4,8**

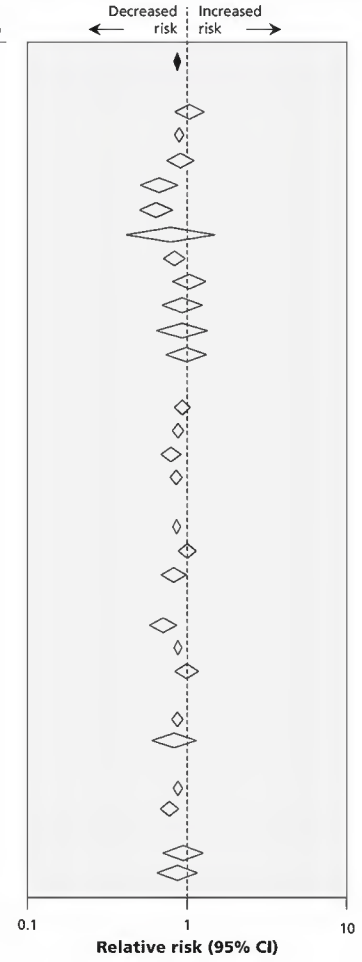


Induzione del travaglio Emilia-Romagna

CeDAP 2016

Overall and subgroup analyses investigating the effect of induction of labour versus expectant management on the risk of cesarean delivery.

Variable	No. of trials	Relative risk (95% CI)	I^2 value, %
Overall	157	0.88 (0.84–0.93)	0.0
Method of induction			
Oxytocin	15	1.03 (0.83–1.28)	0.0
Prostaglandin E2	67	0.90 (0.84–0.96)	0.0
Membrane sweep	17	0.90 (0.74–1.10)	0.0
Alternative method*	8	0.66 (0.50–0.86)	60.7
Misoprostol	11	0.62 (0.48–0.81)	0.0
Relaxin	4	0.79 (0.42–1.50)	0.0
Mixed	17	0.81 (0.70–0.95)	0.0
Isosorbide mononitrate	3	1.03 (0.81–1.31)	0.0
Amniotomy and oxytocin	6	0.96 (0.72–1.29)	10.7
Mifepristone	4	0.93 (0.64–1.34)	0.0
Mechanical	4	1.01 (0.75–1.35)	0.0
Indication for induction			
Rupture of membranes before labour	30	0.95 (0.84–1.07)	0.0
Mixed (fetal, maternal, obstetric)	60	0.87 (0.81–0.95)	0.0
No medical indication	33	0.81 (0.70–0.93)	13.5
Post-dates pregnancy†	34	0.88 (0.80–0.96)	0.0
Gestational age			
Term (37–< 42 wk)	113	0.87 (0.82–0.92)	0.0
Preterm (< 37 wk)	26	1.00 (0.88–1.14)	0.7
Post-term (≥ 42 wk)	14	0.82 (0.69–0.99)	0.0
Definition of induction			
Cervical ripening	17	0.71 (0.58–0.86)	2.3
Induction of uterine contractions	22	1.01 (0.85–1.19)	0.0
Both	118	0.88 (0.84–0.93)	0.0
Cervical status			
Unfavourable	98	0.87 (0.81–0.94)	1.4
Favourable	7	0.83 (0.60–1.14)	0.0
Pregnancy risk			
High	103	0.89 (0.84–0.94)	0.0
Low	54	0.84 (0.75–0.94)	6.9
Parity			
Nulliparous	16	0.97 (0.81–1.17)	0.0
Parous	7	0.94 (0.77–1.13)	9.2



Ekaterina Mishanina et al. CMAJ 2014;186:665-673

CMAJ·JAMC

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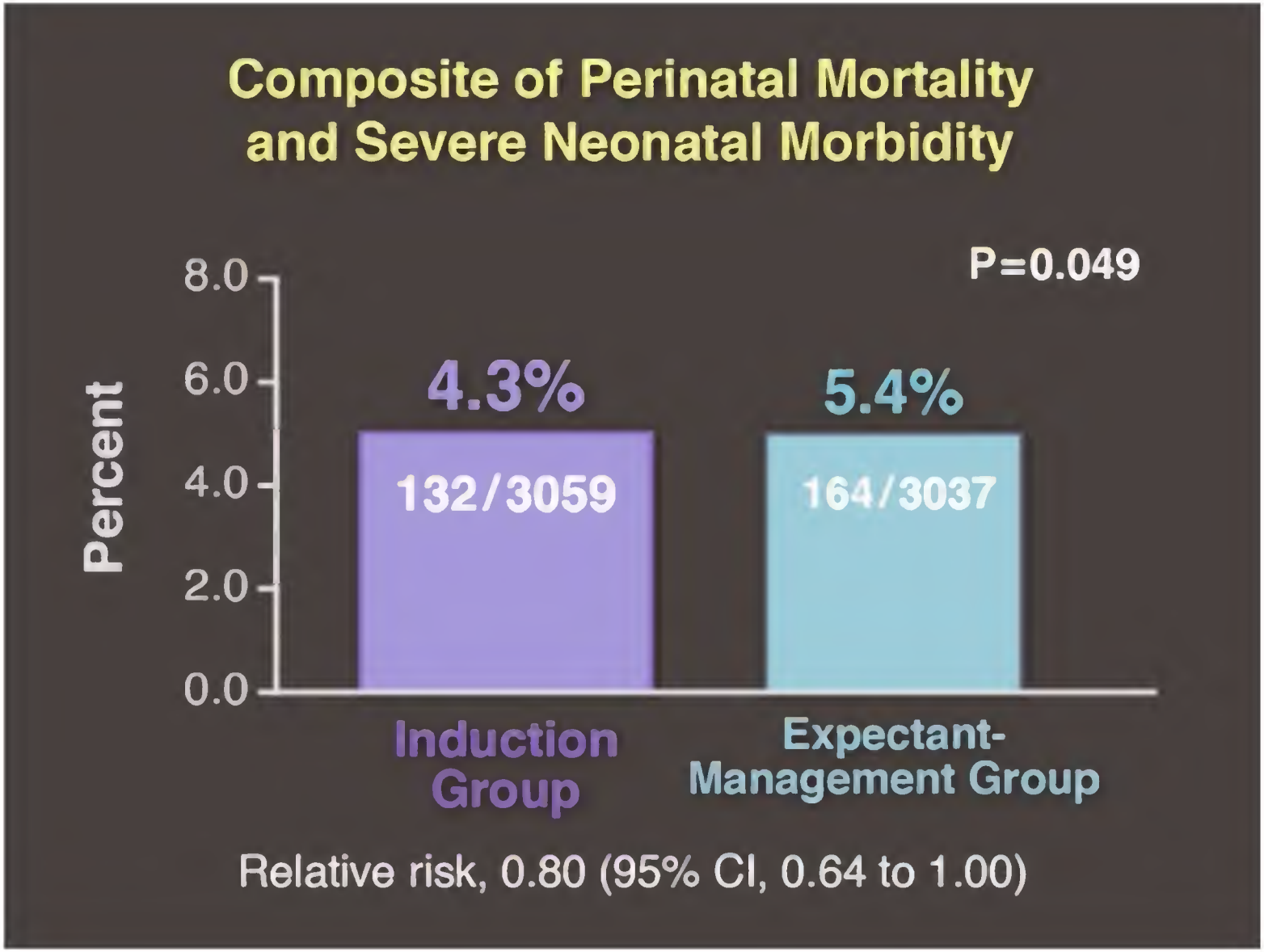
ARRIVE trial

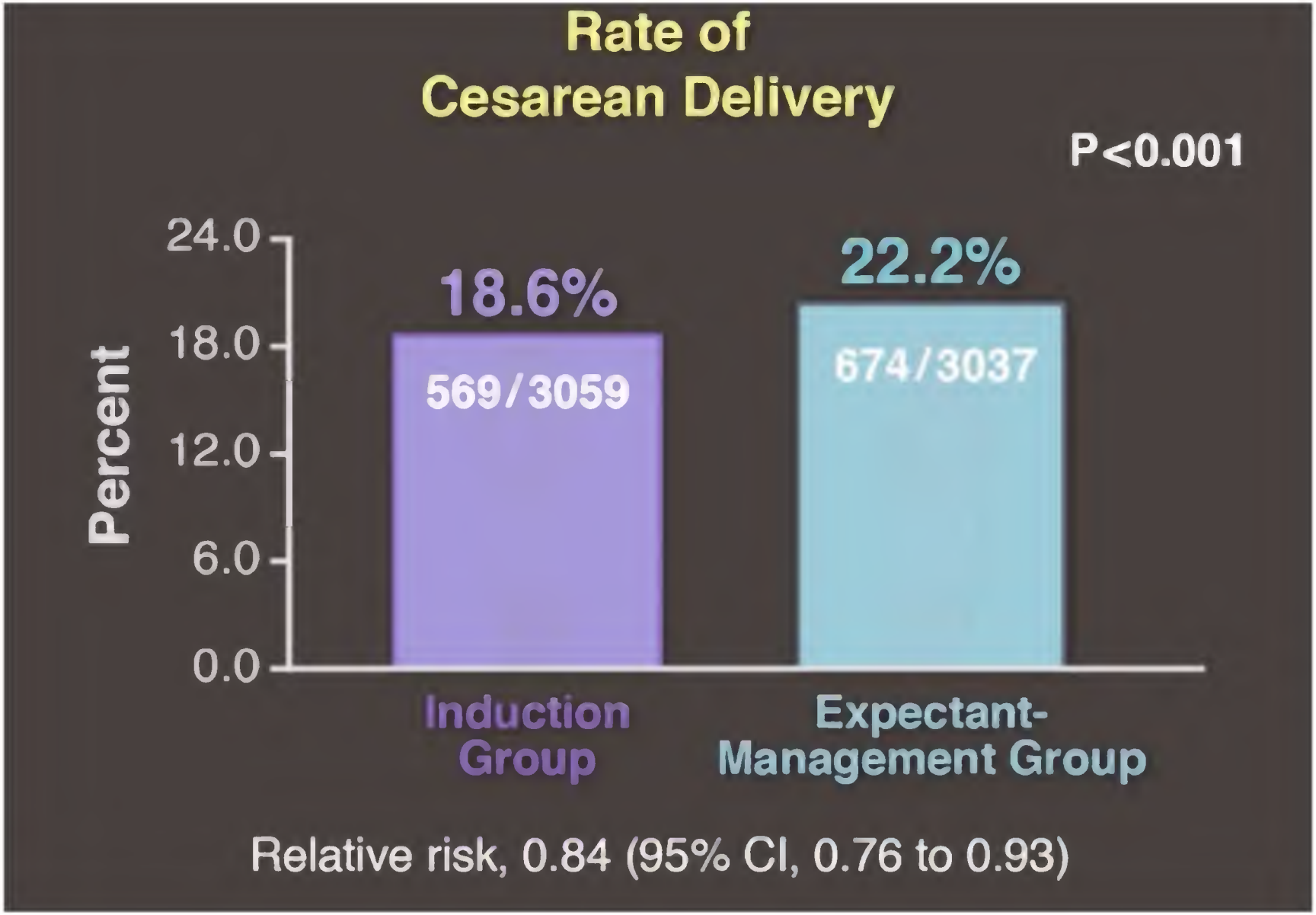
Labor Induction	Expectant Management
N=3062	N=3044
39 Weeks 0 days to 39 weeks 4 days of gestation	Continue pregnancy until at least 40 weeks 5 days

All participants were expected to undergo delivery by 42 weeks 2 days of projected gestational age

Grobman WA et al. N Engl J Med 2018; 379:513-523.



Grobman WA et al. N Engl J Med 2018; 379:513-523.



Grobman WA et al. N Engl J Med 2018; 379:513-523.

Birthplace in England study

- England: all NHS trusts providing intrapartum care at home, all freestanding midwifery units, all alongside midwifery units (midwife led units on a hospital site with an obstetric unit), and a stratified random sample of obstetric units.
- 64 538 eligible women with a singleton term pregnancy who gave birth between April 2008 and April 2010.

BMJ 2011;343:d7400 doi: 10.1136/bmj.d7400

Birthplace in England study

- Composite primary outcome of perinatal mortality and intrapartum related neonatal morbidities.
- 250 primary outcome events; overall weighted incidence of 4.3 per 1000 births (95% CI 3.3 to 5.5).
- No significant differences in the adjusted odds of the primary outcome for any of the non-obstetric unit settings compared with obstetric units.

BMJ 2011;343:d7400 doi: 10.1136/bmj.d7400

Birthplace in England study

- For nulliparous women, the odds of the primary outcome were higher for planned home births (adjusted odds ratio 1.75, 95% CI 1.07 to 2.86) but not for either midwifery unit setting.
- For multiparous women, there were no significant differences in the incidence of the primary outcome by planned place of birth.

BMJ 2011;343:d7400 doi: 10.1136/bmj.d7400

Birthplace in England study

- Interventions during labour were substantially lower in all non-obstetric unit settings.

- Transfers from non-obstetric unit settings were more frequent for nulliparous women (36% to 45%) than for multiparous women (9% to 13%).

BMJ 2011;343:d7400 doi: 10.1136/bmj.d7400

Ministero della Salute

DIREZIONE GENERALE DELLA PROGRAMMAZIONE SANITARIA
DIREZIONE GENERALE DELLA PREVENZIONE SANITARIA
Comitato Percorso Nascita nazionale

LINEE DI INDIRIZZO PER LA DEFINIZIONE E L'ORGANIZZAZIONE DELL'ASSISTENZA IN AUTONOMIA DA PARTE DELLE OSTETRICHE ALLE GRAVIDANZE A BASSO RISCHIO OSTETRICO (BRO)

- 23 ottobre 2017 -

In October 2014, WHO convened a panel of experts. After reviewing the evidence, the panel proposed the use of the Robson Classification at facility level in order to establish a common point for comparing maternal and perinatal data within facilities over time and between facilities.

The panel also decided to adopt the "Robson Classification" as the official name for this classification.

WHO statement on Robson Classification

"WHO proposes the Robson Classification system as a global standard for assessing, monitoring and comparing caesarean section rates within healthcare facilities over time, and between facilities".

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WHO Statement on Caesarean Section Ra

Every effort should be made to provide caesarean sections to women in need, rather than striving to achieve a specific rate

Executive summary

Since 1985, the international healthcare community has considered the ideal rate for caesarean se
to be between 10% and 15%. Since then, caesarean sections have become increasingly common in
developed and developing countries. When medically justified, a caesarean section can effectively pre
maternal and perinatal mortality and morbidity. However, there is no evidence showing the benefit
caesarean delivery for women or infants who do not require the procedure. As with any surgery, caesare
sections are associated with short and long term risk which can extend many years beyond the curre
delivery and affect the health of the woman, her child, and future pregnancies. These risks are higher
women with limited access to comprehensive obstetric care.

In recent years, governments and clinicians have expressed concern about the rise in the numbers o
caesarean section births and the potential negative consequences for maternal and infant health. In addition,
the international community has increasingly referenced the need to revisit the 1985 recommended rate.

Caesarean section rates at the population level

WHO conducted two studies: a systematic review of available studies that had sought to find the ideal caesarean rate within a given country or population, and a worldwide country-level analysis using the latest available data. Based on this available data, and using internationally accepted methods to assess the evidence with the most appropriate analytical techniques, WHO concludes:

1. Caesarean sections are effective in saving maternal and infant lives, but only when they are required for medically indicated reasons.
2. At population level, caesarean section rates higher than 10% are not associated with reductions in maternal and newborn mortality rates.
3. Caesarean sections can cause significant and sometimes permanent complications, disability or death particularly in settings that lack the facilities and/or capacity to properly conduct safe surgery and treat surgical complications. Caesarean sections should ideally only be undertaken when medically necessary.
4. Every effort should be made to provide caesarean sections to women in need, rather than striving to achieve a specific rate.
5. The effects of caesarean section rates on other outcomes, such as maternal and perinatal morbidity, paediatric outcomes, and psychological or social well-being are still unclear. More research is needed to understand the health effects of caesarean section on immediate and future outcomes.

Caesarean section rates at the hospital level and the need for a universal classification system

There is currently no internationally accepted classification system for caesarean section that would allow meaningful and relevant comparisons of CS rates across different facilities, cities or regions. Among the existing systems used to classify caesarean sections, the 10-group classification (also known as the 'Robson classification') has in recent years become widely used in many countries. In 2014, WHO conducted a systematic review of the experience of users with the Robson classification to assess the pros and cons of its adoption, implementation and interpretation, and to identify barriers, facilitators and potential adaptations or modifications.

WHO proposes the Robson classification system as a global standard for assessing, monitoring and comparing caesarean section rates within healthcare facilities over time, and between facilities. In order to assist healthcare facilities in adopting the Robson classification, WHO will develop guidelines for its use, implementation and interpretation, including standardization of terms and definitions.

The 10 groups of the Robson Classification

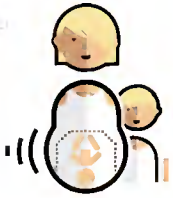
GROUP **1**

Nulliparous women with a single cephalic pregnancy, ≥37 weeks gestation in spontaneous labour

GROUP **2**

Nulliparous women with a single cephalic pregnancy, ≥37 weeks gestation who either had labour induced or were delivered by caesarean section before labour

GROUP **3**



Multiparous women without a previous uterine scar, with a single cephalic pregnancy, ≥37 weeks gestation in spontaneous labour

GROUP **4**

Multiparous women without a previous uterine scar, with a single cephalic pregnancy, ≥37 weeks gestation who either had labour induced or were delivered by caesarean section before labour

GROUP **5**

All multiparous women with at least one previous uterine scar, with a single cephalic pregnancy, ≥37 weeks gestation

GROUP **6**

All nulliparous women with a single breech pregnancy

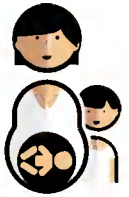
GROUP **7**

All multiparous women with a single breech pregnancy, including women with previous uterine scars

GROUP **8**

All women with multiple pregnancies, including women with previous uterine scars

GROUP **9**



All women with a single pregnancy with a transverse or oblique lie, including women with previous uterine scars

GROUP **10**

All women with a single cephalic pregnancy <37weeks gestation, including women with previous scars

New screening trial aims to improve detection and treatment for Group B Strep in pregnant women

Date: 15 May 2019

A landmark NIHR-funded clinical trial is aiming to improve the diagnosis and treatment of a potentially life-threatening infection in newborn babies.

The UK is one of the only countries in the developed world where there is currently no standard screening programme for the bug in pregnant women and yet it is the leading cause of infection in newborns.

The new trial will test the effectiveness of two types of screening compared to no screening in 80 hospitals in England and Wales. The results will inform future pregnancy screening policy in the UK.

Group B Streptococcus is a bacteria commonly found in women which causes the carrier little or no harm but it can be passed to the baby around birth. The bacteria will not cause infection in the vast majority of babies, but 1 – 2 per cent will develop group B Strep, which causes a range of serious infections including pneumonia, meningitis and septicaemia (blood infection) and is especially dangerous to those babies born prematurely.

Group B strep infection in babies can be prevented by giving intravenous antibiotics to women during labour but there are concerns that routine testing would lead to large numbers of women being given antibiotics when they do not need them and that the longer-term effects of antibiotics on mother and baby are unknown. Widespread use of antibiotics also contributes to antimicrobial resistance in the general population.

Although routine group B strep screening is undertaken in some countries the evidence for its clinical and cost effectiveness is still uncertain.

Current UK policy is to assess whether pregnant women are likely to be carrying the bacteria using a set of criteria, and to treat accordingly. This process is not very accurate. Previous UK research has found that:

- 65 per cent of babies who develop group B strep infections have mums who had no risk factors for carrying the bacteria
- 70 per cent of women who do have risk factors do not actually harbour the bacteria and are therefore unnecessarily given antibiotics.

In addition, women who are found to have group B strep during pregnancy may not have the infection by the time they give birth.

The GBS3 trial aims to clarify these uncertainties by comparing usual treatment with a) using a lab culture test to check women at 35 weeks of pregnancy and b) doing a 'bedside test' at the start of labour.

FNOMCeO e FNOPI

Fad In Med

La formazione a distanza per medici, odontoiatri, infermieri, assistenti sanitari e infermieri pediatrici

Ministero della Salute

Accedi ai corsi FAD →

CORSI FAD

Nascere in sicurezza

ID 263732. È online sulla piattaforma FadInMed il nuovo corso di formazione a distanza gratuito "Nascere in sicurezza" (14 crediti ECM), che la FNOMCeO propone in un momento di grande criticità

AUTORE: REDAZIONE - 03/05/2019

Calendario Eventi

« MAGGIO 2019 »

L	M	M	G	V	S	D
29	30	1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31	1	2

GRAZIE