

Supporting Vaginal Birth

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Conflict of Interest Disclosure

We have no conflicting financial interest that would bias this presentation



Objectives

- Safely support intended vaginal birth
- Practice comfort measures aimed to relieve pain during labor and birth
- Identify provider and system improvement opportunities aimed to reduce cesarean section
- Cite evidence based management for obstructed labor
- Highlight how data utilization can reduce primary cesarean for nulliparous women



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CMQCC California Maternal Quality Care Collaborative

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Let's begin with a question:

You are about to give birth to your first baby. Pregnancy has gone smoothly without any complications. Birth seems as if it will, too. It's one baby, head down, at term — in other words, you're at low risk for complications.

What's the #1 influence on whether or not you'll have a C-section?

(A) Your personal wishes.

- (B) Your choice of hospital.
- (C) Your baby's weight.
- (D) Your baby's heart rate in labor.
- (E) The progress of your labor.



There is a Large Variation in Cesarean Rates Among California Hospitals



Published from CMQCC data set





What Indications Have Driven the RISE in CS?





New National Guidelines for Defining Labor Abnormalities and Management Options

Table 3. Recommendations for the Safe Prevention of the Primary Cesarean Delivery

Recommendations

Grade

Strong

Induction of labor

Before 41 0/7 weeks of gestation, induction of labor generally should be performed based on maternal and fetal medical indications. Inductions at 41 0/7 weeks of gestation and beyond should be performed to reduce the risk of cesarean delivery and the risk of perinatal morbidity and mortality.

Cervical ripening methods should be used when labor is induced in women with an unfavorable cervix.

If the maternal and fetal status allow, cesarean deliveries for failed induction of labor in the latent phase can be avoided by allowing longer durations of the latent phase (up to 24 hours or longer) and requiring that oxytocin be administered for at least 12–18 hours after membrane rupture before deeming the induction a failure. Strong rec

Strong rec



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Medical Indications for Early Term Delivery



Consult Perinatologists

agrees with plan

- Abruptio Placentae
- Hypertensive disorders
- Diabetes
- 41 + 0 weeks
- PROM
- Chorioamnionitis
- Fetal demise current/prior
- Oligo or Polyhydramnios
- Non-reassuring fetal status
- Isoimmunization
- Fetal malformation
- Twin with complication
- Maternal conditions/disease
 - cardiac, renal, hepatic, hematologic

Risk-benefit analysis



Balancing 2 Principles

- 1. Maternal
 - Benefit should outweigh risk
- 2. Fetal
 - Optimal outcome

Shared Decision Making

The Share Model



The Decision Talk Model



The Share approach: AHRQ http://www.ahrq.gov/professional/education/cirriculum-tools

Romano, A. Activation, engagement, and shared decision making in maternity care, 2015. Maternityneighborhood.com



21 days later Kristen developed DIC and required emergency surgery to remove:

- placental tissue
- repair her bladder
- re-implant her ureter
- remove her uterus, cervix and appendix.
 She hemorrhaged during surgery and required transfusion of 26 units of blood products
- Maternal death for women with placenta accreta can be as high as 1 in 16.

Because of the unpredictability of vaginal birth, I would prefer a scheduled cesarean section birth for myself or my partner

- Develop and conduct inter-professional and inter-disciplinary education around the short- and long-term risks of cesareans
- Patient/Family Support Bundle, Council on Patient Safety in Women's Health Care
- CMQCC Resource: Risk Considerations for Primary Cesarean
 - YouTube: Patient Story: Kristen Terlizzi

https://www.youtube.com/watch?v=RMnQZUqQhjU



Pro's and Con's of C Section



https://www.youtube.com/watch?v=Ilgc2Lbp2-E



Epidemiologic Framework

- Obstetric models of perinatal death
 - Increases interventions based on empiric evidence
- NNT Numbers needed to treat to prevent 1 perinatal death
 e. g. NNT (excess inductions /cesareans = 145 to prevent
 1 perinatal death
- Provides a theoretical justification for the intervention
 - The fetuses at risk
 - The women at risk



Overview: Healthy mothers and babies should wait for labor

 In 2012 IOL was 23.4% of all birth

 Augmentation rates similar to IOL rates



NOTES: Singletons only. Early preterm is less than 34 weeks of gestation; late preterm is 34–36 weeks; early term is 37–38 weeks; full term is 39–40 weeks; late term is 41 weeks; postterm is 42 weeks or more. Access data table for Figure 1 at: http://www.cdc.gov/nchs/data/databriefs/db155_table.pdf#1. SOURCE: CDC/NCHS, National Vital Statistics System.

http://www.cdc.gov/nchs/births.htm

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What about the Arrive Trial?

If induction is the plan what is the preferred method?





Induction of Labor Update: working the evidence to support vaginal birth

Factors determining success of IOL

- Parity
 - Multiparous
 - –Nulliparous C/S rate $\widehat{\mathrm{t}}$ to 65.4% if BS=3/10
- Cervical score
 - \leq 5 unfavorable
 - \geq 6 ripe
- Position of the vertex
 - Persistent OP
- Method of induction



Long, Thick and Closed.....

- Cervical status is the most important factor predicting the success of induction of labor
- Perform the initial vaginal exam prior to initiating pharmacologic therapy

 If the Bishop score is > 8 same probability of vaginal birth as spontaneous labor



C Healthwise, Incorporated



Modified Bishop Scoring System The most reliable and cost effective method of predicting the

likelihood of successful induction **Bishop score = 3**

	0	1	2	3
Dilation	Closed	1-2 cm	3-4 cm	5-6 cm
Effacement	0-30%	40-50%	60-70%	>80%
Station (based on a –3 to +3 scale	-3	-2	-1, 0	+1, +2
Cervical consistency	Firm	Medium	Soft	
Position of the cervix	Posterior	Midposition	Anterior	

*Cervical dilatation is the strongest factor associated with syccessful induction

MISOPROSTOL (con't)

Misoprostol Protocol

- Misoprostol PO
- 1st Dose25mcg q 2 hours x 6 doses
- 2nd Dose 100mcg PO
 - 4-6 hours following 1st dose of 50mcg.
 - 100mcg PO every 4 hours to a maximum of 6 doses per 24 hours.
- Do NOT start oxytocin infusion until at least 4 hours after last dose to avoid tachysystole.
- UCSF recently reduced protocol dosage

Tenore, 2003; Goldberg & Wing, 2003



Misoprostol Stepwise Oral Guidelines

- 1. Dosing- initial: 50mcg PO
- 2. Dosing- subsequent: Patient reassessed 3-4 hours. If no adequate contraction pattern and FHR reassuring, give next dose.
 - May increase dose to 100mcg. Dose may be increased only if patient has received at least 2 doses 50mcg without achieving adequacy.
 - If pattern adequate at 3-4 hours, but subsequently becomes inadequate, another dose may be given at same mcg amount as last dose or lower



Mechanical Dilators

- Foley Catheter
 - Most common mechanical method of cervical ripening.
 - Creates pressure on the internal cervical os increasing production of local prostaglandins.



Document
✓ Type and size of balloon catheter
✓ Amount of fluid instilled in balloon



Patient Information

CMQCC

Foley Catheter Cervical Ripening Potient Information Shoet

Dell'Patient,

Tow doctor the planned an induction of abor and recommends having a Poley catheter placed in your density. By performing this presentation was hope to other and again the area of a twice and hardware and easier. This presents to called "specing" the carvia, a holey catheter is a cot rubber table with a small vater filter ballows or the end, the areferent takent the thebares of a great and the latitude mode with a size of a gregories.

The procedure:



In the day prior to the induction you will be sated to core into the officers placement, strainly you are it and out it about the dot induction. In the office you will be sated to empty your blacker and precise a similar faction to inving a text ansat task, once a positioned on the estimates table with your fact the attinue, the operatum will be introduced to that we can statice the certain opening. The certaix will be estanded for the top office ablactor to minimize your raik of infaction. The content to reministic your raik of infaction. The contents the gently these all the spening up to a level where the belloon can be infated and set between theology of waters and the upper portion of the cards. The below head will port pressure on the tableon and we

believe this is what will reper the server. Once it people's the nurse will influe the balloom with about an ounce of reals. You may have the first forward, into the balloom but it should not hurt. Once inflated we will be of the optimetry with two dee just outside the optiming to your regime and our the long portion of the optimizer off. The and of the satisfier is then relied that the regime and a guess paid about ball balloot bart to find anything in the regime.

What is equest

Note patients report that the orthests and pace leads like a large tensor. It should not interfere with non-using the betricomor reading pain. The processor will not reade contractions, our may none their more noticeable because of patients more precision on the omits. In means patients in the middle of the right non-will notice some increased precision and perhaps done opoting, with or without the contents coming out of the right non-will notice some increased precision only perhaps done opoting, with or without the contents coming out of the rights, the contents will not be applied on a partice to make means one as 3 continues the contents. Note commonly, the contents will be done will be the applied on removed the next resoning in the contents of the contents of the precision will be discussed to 3 continues by the mean marking. You wanted the next solution of a number of child parameters.

MANAGE IN CARL

The dependence of your factor or come to the negativity of one experience () a grant or lass of factor the regime, of reset (-com (2008)(0)) if or chine, is intereding present them a period wind of and comping or strong contractions. Hence any your physician of them are neglected instructions for your case.

Symplete any quantum class why see as both g as indicates of labor as allow the contribution plane arby an desire in application

Appendix R Induction of Labor Algorithm

California Maternal Quality Care Collaborative

CMQCC Toolkit to Support Vaginal Birth

and Reduce Primary Cesareans





Induction Bundle

Verify Informed consent

provider has discussed the



- indications and potential risks/benefits of IOL
- Verify indication for induction
 - Documented in the medical record
- •Assessment of gestational age
 - (ensuring that gestational age is greater than or equal to 39 weeks)
- Pelvic assessment (Document Bishop's score)
 - Cervical status, fetal station, presentation



Standardization reduces variation

The American College of Obstetricians and Gynecologists Women's Health Care Physicians



Patient Safety Checklist 🗸

Number 5 • December 2011 (Replaces Patient Safety Checklist No. 1, November 2011)

SCHEDULING INDUCTION OF LABOR

Date Patient		Date of birth	MR #	
Physician or certified nurse-m	idwife	Last menstrual period		
Gravidity/Parity				
Estimated date of delivery	Best estimated gestation	onal age at delivery		
Proposed induction date Proposed admission time				
Gestational age of 39 0/7 weeks or older confirmed by either of the following criteria (1):				
Ultrasound measurement at less than 20 weeks of gestation supports gestational age of 39 weeks or greater				
Fetal heart tones have been documented as present for 30 weeks of gestation by Doppler ultrasonography				



Standardization reduces variation

Indication for induction: (choose one)

- Medical complication or condition (1): Diagnosis: ______

Patient counseled about risks, benefits, and alternatives to induction of labor (1)

Consent form signed as required by institution

Bishop Score (see below) (1): _____

	Factor				
Score	Dilation (cm)	Position of Cervix	Effacement (%)	Station*	Cervical Consistency
0	Closed	Posterior	030	-3	Firm
1	1-2	Midposition	40-50	-2	Medium
2	3-4	Anterior	60-70	-1, 0	Soft
3	5-6	_	80	+1, +2	

Bishop Scoring System

*Station reflects a -3 to +3 scale.

Modified from Bishop EH. Pelvic scoting for elective induction. Obstet Gynecol 1964;24:266-8.

- Pertinent prenatal laboratory test results (eg, group B streptococci or hematocrit) available (4, 5)
- Special concerns (eg, allergies, medical problems, and special needs): ______

To be completed by reviewer:

- Approved induction after 39 0/7 weeks of gestation by aforementioned dating criteria.
- Approved induction before 39 0/7 weeks of gestation (medical indication)
- HARD STOP gestational age, indication, consent, or other issues prevent initiating induction without further information or consultation with department chair



Patient Safety Checklist 🗸

Number 2 • November 2011

INPATIENT INDUCTION OF LABOR

Date Pat	tient	Da	te of birth	MR#
Physician or certified nu	rse-midwife		_ Last menstrual perior	d
Gravidity/Parity				
Estimated date of delive	гу	Best estimated gestationa	d age at delivery	
Indication for induction				
Fetal Presentation (1)				
Vertex				
Gitter				
If other, phy	sician or certified nur	se-midwife notified		
Estimated fetal weight				
Patient has a complexity	leted medical history	and physical examination		
Known allergies	identified			
Medical factors	that could effect anes	thetic choices identified		
Pertinent prenat	al laboratory test resul	lts (eg, group B streptocoo	ci or hematocrit) availab	de (2, 3)
Other special co	ncems identified (eg,	medical problems and spe	cial needs):	
Patient counseled a	bout risks and benefit	s of induction of labor (1)		
Consent form si	gned as required by in	nstitution		
Bishop Score (see belo	w) (1):			



Hoag Induction Scheduling Process

- Patient will be educated utilizing the "Induction Education" form by their OB Physician in the office
- OB Physician will complete Induction of Labor Scheduling Request (Form PS 5529)
- OB Physician Office will fax the Hoag Scheduling Request to LDR Scheduling (949) 764-5735, no earlier than 9:00 am, 1 week prior to the requested induction date. *Requests received more than 1 week prior to induction date will be discarded; requests received prior to 9:00 am will not receive priority.*
 - For elective inductions, the office must also fax a completed/signed "Induction Education" sheet in order for the case to be scheduled.
- OB Physician Office can follow their fax with a call to Hoag LDR Scheduling (949) 764-8484 for confirmation of availability of requested date/time.



Hoag Induction Scheduling Process con't.

- Induction will be entered into SIS (Surgical Information System) by Hoag LDR Scheduling
- Within 24 hours, a Hoag Physician Leader (Chief of Maternal Child Health, Laborist, Department Head, etc.) will review the Scheduling Request form for completion and appropriate gestational age.
- If the Hoag Physician Leader feels additional discussion/information is needed, he/she will call the OB.
- Please ensure that your patients understand that the requested date and time is not a guarantee. Accommodation of this request is dependent upon capacity, patient acuity and staffing.


childbirth connection

Labor Induction Basics

What is labor induction? What causes labor to begin?



What is the safest point in pregnancy for the baby to be born?

Why might my care provider recommend induction?

Why might a woman choose induction when there is no clear medical reason?

Why are so many women experiencing induced labor?

What factors affect whether I have an induction?

Are there differences in when care providers recommend induction of labor?

Are the risks of induction higher for certain women?



NEW ACOG STANDARD LABOR DEFINITIONS (2014)	
LABOR	Uterine contractions resulting in cervical change (dilation and/or effacement) Phases: • Latent phase – from the onset of labor to the onset of the active phase • Active phase – accelerated cervical dilation typically beginning at 6 cm
AUGMENTATION OF LABOR	The stimulation of uterine contractions using pharmacologic methods or artificial rupture of membranes to increase their frequency and/or <u>strength</u> following the onset of spontaneous labor or contractions following spontaneous rupture of membranes. If labor has been started using any method of induction described below (including cervical ripening agents), then the term, Augmentation of Labor, should not be used.
INDUCTION OF LABOR	 The use of pharmacological and/or mechanical methods to initiate labor (Examples of methods include but are not limited to: artificial rupture of membranes, balloons, oxytocin, prostaglandin, Laminaria, or other cervical ripening agents) Still applies even if any of the following are performed: Unsuccessful attempts at initiating labor Initiation of labor following <u>spontaneous ruptured membranes without</u> <u>contractions</u>

Menard MK, Main EK, Currigan SM. Executive Summary of the reVITALize Initiative: Standardizing Obstetric Data Definitions. Obstet Gynecol 2014 July; 124:150-3.

Summary

- IOL is performed frequently for medical and obstetric indications – avoid elective inductions with nullips BS< 8
- Identify clear indication of benefits and risks associated with IOL and explain these to the patient – use consent/checklists
- The best predictor of labor induction success is cervical dilatation
- The ideal method for induction of labor varies among patients and is yet to be identified – consider outpatient cervical ripening
- Follow hospital, provider, and nurses success rate of IOL



Obstetric Triage that Supports Vaginal Birth



Obstetric Triage: Objectives

- Compare and contrast medical-legal implications of telephone and outpatient triage care
- Determine the right time for a woman to transition from her home to the hospital for birth
 - 5-1-1 rule (5 minutes apart, lasting 1 minute, for 1 hour
 - Recent recommendations 4-1-1 or even **3-1-1** (Lamaze Intl.)
- Explore verbal and written discharge to home instructions
 - Most women report they feel most comfortable at home
 - Freedom of movement
 - Able to do things for themselves



Multiple Functions of OB Triage Units

- Labor assessment and evaluation
- Decompression of labor and delivery
- Use as a holding area (busy L&D)
- Fetal evaluation and assessment
- Evaluation of medical/ OB complaints (after hours)
- Initial stabilization of OB complications
- Evaluation of OB referrals /transfers
- Triage OB telephone calls
- Selected OB procedures
- Source of OB care when normal source isn't accessible or available



Value of the Nursing Role

- 1st to evaluate
- Detect abnormal s/sx
- Alert the team
- Optimize patient outcome



EMTALA HIPPA

The American College of Obstetricians and Gynecologists

COMMITTEE OPINION



- Number 667 July 2016
- Hospital-Based Triage of Obstetric Patients
- Obstetric units are urged to collaborate with emergency departments and hospital ancillary services, as well as emergency response systems outside of the hospital, to establish guidelines for triage of pregnant women
- Recently developed, validated obstetric triage acuity tools may improve quality and efficiency of care and guide resource use, and they could serve as a template for use in individual hospital obstetric units.

OBSTETRICS & GYNECOLOGY 2016; 128:e16-9





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Ruhl, C., Scheich, B., Onokpise, B., Bingham, DJournal of Obstetric, Gynecologic & Neonatal Nursing, Volume 44, Issue 6, 2015, 701–709



Toolkit: Implement Early Labor Supportive Care Policies and Active Labor Criteria for Admission

- Translation: Early labor at home. Let labor start on its own!
- Physiologic onset of labor is critical to the success in labor, and introduces moms and babies to protective hormonal pathways
- Women admitted in early labor are more likely to have a cesarean, and more likely to have routine interventions e.g. oxytocin even if not clinically necessary



Toolkit: Early admission support

- Admission policy or checklist for spontaneous labor
- Latent labor support and therapeutic rest policies
- Patient education materials to explain rationale for delayed admission, reduce anxiety and provide guidance on when to return to the labor and delivery unit
- Material with specific guidance for partners and family members as to how to best support the woman in early labor



Coping with Labor Algorithm V2®



n's Hospitals

Appendix M Spontaneous Labor Algorithm



Adapted with permission from Washington State Hospital Association

CMQCC Toolkit to Support Vaginal Birth and Reduce Primary Cesareans

CMOCC

California Maternal

ESTABLISHING PHONE TRIAGE



EDUCATION COMPETENCY DOCUMENTATION





Question:

Does your Department have a formal phone triage policy and procedure ?

- a) No we instruct the patient to call their doctor
- b) No but we informally guide them over the phone
- c) Yes formal P&P with written documentation
- d) Not sure we're kind of "winging it" no formal training
- e) Other



Phone Triage for Labor

Department guideline?

Gestational age Complications of pregnancy ROM **Mucous/Bloody Show** Uterine activity Recent cervical exam Fetal Movement Assess stay home & call back or come in Notify MD / NP/ CNM



"Welcome policy"

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Competence Assessment

- L&D Nurses must complete a series of competence assessments with qualifying exams
 - This education material was based on current evidence and practice standards
 - Emphasis on triage as a systematic approach to rapid patient assessment
 - Assigns priority on the degree of need
 - Primary goal for triage nurse to assign acuity within 10 minutes of arrival to the unit
- Once the educational requirements the nurse is deemed "Triage competent"



BASIC CONSIDERATIONS IN ESTABLISHING A TELEPHONE TRIAGE SYSTEM

- 1. Are "Protocols" or "Guidelines" an Appropriate Format?
- 2. What's the First Step in Drafting Protocols or Guidelines?
- 3. Who Should Handle the Calls?
- 4. How Should Calls Be Documented?
- 5. What Information Is Pertinent for Each Patient Who Calls?
- 6. Health Insurance Portability and Accountability Act (HIPAA)
 - Speak to the patient, check MR for authorization, confidential record
- 7. Reducing legal risks/improving patient care
 - Adequately trained staff, protocols in writing, proper documentation

Telephone Triage for Obstetrics and Gynecology, 2010. Philadelphia Vicki E. Long MSN, CNM, RN, Patricia C. McMullen PhD, JD, WHNP-BC, RN



UCSF OB Phone Triage: 3 Recommendations

- 1. One person responsible for calls
- 2. Protocols implemented Screen sh
- 3. Documentation

Phone triage simulation

Screen shot of order setsDocumented in EPIC



UCSF OB Phone Triage: Working Diagnosis

- Neither MD's or RN's can diagnose without an exam
- Acceptable to form initial impressions "working diagnosis"
- Identify symptoms and classify by acuity rather than seeking to determine specific causes of symptoms
- The MD or RN must always inform patient of the presumptive status of this evaluation
- •Use language the client can understand



UCSF OB Phone Triage: Communication

Goal of Telephone triage:

- Listen receive information
- Assess acute verses non-acute
- Give and receive information
- Release anxiety inspire, persuade engender trust
- Problem solve



Hospital Triage: Review Assessments & Interventions

- Labor Evaluation
- ROM
- Contraction pattern
- Frequency/ Intensity



- Discomfort in lower abdomen, back, and groin
- Does activity effect or ↓ UC's
- Cervical change
- Latent phase
 - Long contraction phase
 - Sedation decreases or stops contractions
 - Bloody Show usually not present

Discharge for latent phase

- Eat easily digested foods, drink plenty of fluids
- Alternate activity with rest and take nice walks
- Prepare last minute things for baby
- Surround yourself with people that help you feel comfortable
- Relax with a warm shower
- Listen to music to maintain a tranquil environment
- Ask your partner for a massage
- If unable to talk during a contraction begin a slow chest breathing pattern
- Listen to you body and follow your instinct when it's time to come back to the hospital



Obstetric Triage: Staffing

- Multiply 1.2 1.5 of overall birth volume
- Requires assessment of mother and fetus
 - "in a timely manner" -not defined by AAP or ACOG
- Care is ongoing until disposition
- The initial triage process (10 20) minutes
- Requires 1 nurse to 1 woman presenting for care
- This ratio may be changed to 1 Nurse: 2-3 woman as maternalfetal status is determined to be stable or until patient disposition is determined
- I Nurse to 2-3 women during non-stress testing

Guidelines for Professional Registered Nurse Staffing. AWHONN,2010.

Therapeutic rest

- Protocol
- Morphine Phenergan dosing
- Trial in progress



Summary

- Telephone triage may be a safe and cost effective means to initiate patient evaluation
- Many women present to the hospital for evaluation prior to their admission for labor and birth
- Nurses play a key role in triage and discharge
- Some nurse conduct MSE in the absence of direct evaluation by a physician per EMTALA
- Mother and baby should be stable prior to discharge to home
- Discharge instructions provide important information for women and their families to cope with latent phase
- Utilization of MFTI, phone triage, the CMQCC triage algorithm, and therapeutic rest promote the right time for a woman to transition from home to hospital for vaginal birth









Practical Resources for the Childbirth Education Professional

About Lamaze

Membership Education

Certification L

n Lamaze for Parents







Labor Support: A Return to the Basics

Alicia Pollak, RN, CNM, MS Birth Center

Objectives

- Understand the mechanisms of labor and how the fetus is birthed physiologically
- Name three ways to comfort women during labor
- Name three "tools" readily available that could be used to aid in the comfort of women laboring



Childbirth through the ages



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"<u>Mother Giving Birth</u>" by <u>Steven Dameron</u> is licensed under <u>CC by 2.0</u>





Dumbarton Oaks Research Library and Collection



Science Museum, London , copyrighted work available under Creative Commons Attribution only license <u>CC 4.0</u>



A birth-scene. Oil painting by a French (?) painter, Åbo, <u>CC by 4.0</u>





http://resource.nlm.nih.gov/101434275



http://resource.nlm.nih.gov/101392809





Fig. 71. Rebekka gebiert Jakob und Esau. Von Étienne Delanne gestochen.

http://resource.nlm.nih.gov/101407270



http://resource.nlm.nih.gov/101449273











Image from page 173 of "Labor among primitive peoples. Showing the development of the obstetric science of to-day, from the natural and instinctive customs of all races, civilized and savage, past and present" (1883) Internet Archive Book Image



Internet Archive Book

Review the Mechanisms of Labor- The 7 Cardinal Movements

- ENGAGEMENT: widest part of fetal head has passed through pelvic inlet
- DESCENT: progression of fetal head into the pelvis (in relation to ischial spines)
- FLEXION: fetal head reaches soft tissue of maternal pelvic floor
- **INTERNAL ROTATION**: to accommodate changes of pelvic diameters (transverse to anterior-posterior)
- **EXTENSION**: born in extension, under the symphis pubis
- EXTERNAL ROTATION OR RESTITUTION: the head realigns with the shoulders, which engage and move similarly through the pelvis, to the head
- **EXPULSION**: the rest of the body is born (via curve of Carus)


A little Theory....

Why do our interventions work?

- Grantly Dick-Read in 1942, <u>Childbirth without Fear</u> "Cycle of Fear > Tension> Pain"
- Melzack's article in 1965, Pain mechanisms: a new theory
- Melzack's article 1999, Pain-an overview: "The neuromatrix theory of pain proposes that pain is a multidimensional experience produced by characteristic "neurosignature" patterns of nerve impulses generated by a widely distributed neural network- the "body-self-neuromatrix"- in the brain." Pain can be triggered by sensory inputs or independent of them.
- Trout, CNM 2004, The neuromatrix theory of pain: Implications for selected nonpharmacologic methods of pain relief for labor



Knowledge can break the Fear-Tension-Pain cycle













How do women cope?

- "A review of 10 qualitative studies [2015] reported the two main influences on a woman's ability to cope with labor pain were (1) continuous individualized support, and (2) acceptance of the need for experiencing some pain to birth their infants. Constant support established a sense of safety and reduced feelings of loneliness and fear, which enhanced their coping ability. However, the review also reported a gap in many clinical settings between women's need for continuous support and its availability."
- "The American College of Obstetricians and Gynecologists has stated that 'one of the most effective tools to improve labor and delivery outcomes is the continuous presence of support personnel, such as a doula'"

Simkin, P and Klein, M. *Nonpharmacologic approaches to management of labor pain.* Up to date (2017).



Non-pharmacologic approaches to management of labor pain

Up to Date 12/2017 Authors Penny Simkin and Michael Klein

Classification of interventions into three categories

- Low-resource- "simple, readily available, inexpensive, and low-risk techniques including distraction, self-help, and comforting strategies or tools. These may be used individually or in combination with others"
- <u>Moderate-resource</u>- "interventions require patient motivation, specialized training, professional assistance, specific equipment, financial resources, or a combination thereof"
- High-Resource- "interventions require professional training and monitoring, have greater risk of adverse effects on mother, fetus, or labor, require increasingly complex equipment and training by staff and/or patient, and incur significant cost. They are highly effective in reducing labor pain, and include neuraxial analgesia and anesthesia and inhaled anesthesia



Non-pharmacologic approaches to management of labor pain

Up to Date 12/2017 Authors Penny Simkin and Michael Klein

- Low-resource Movement, birth ball, touch and massage, acupressure, application of heat or cold, breathing techniques with relaxation, showers, music and audioanalgesia,
- Moderate-resource- Aromatherapy, acupunture, Yoga, Sterile water injections, hypnosis, biofeedback, Transcutaneous electrical nerve stimulation, water immersion
- <u>High-Resource</u>- Epidural, combined spinal epidural, inhaled analgesia



Tools You Might Already Have in Your Birthing Rooms

- Eye mask
- Sheet (you don't need a fancy Rebozo)
- A partner
- Water in some form (a bath, a shower)
- A basin or water pitcher
- Your labor bed should become a BFF (and that finicky bar!)
- Hand towels and wash-clothes
- A fan
- Warm blankets
- Pillows
- Sweet things to drink, lip gloss for dry mouth-breathing lips



Other Birth Tools that You Might See Brought to Hospital

- TENS unit
- Aromatherapy
- Rice packs (check your policy, caution use with epidurals)





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Acupressure Bladder Points 26 and 32



<u>A transcutaneous electrical nerve stimulator (TENS)</u> by Michaelj0505 on Wikipedia Commons, licensed by <u>CC</u> <u>3.0</u>



Bladder 26 and 32



Guanyuanshu BL-25





Over the second posterior sacral foramen.







Birthball by Rshumway licensed by CC 4.0





Second Stage Management



2nd Stage of Labor





To Push or Not to Push That is the Question!

ACOG Opinion 2017:

Reviewed evidence for labor care that minimizes intervention

In the absence of the need for a expeditious delivery, a woman may be offered a rest 1-2 hours at the onset of 2^{nd} stage



Effect of immediate vs delayed pushing

JAMA | Original Investigation

Effect of Immediate vs Delayed Pushing on Rates of Spontaneous Vaginal Delivery Among Nulliparous Women Receiving Neuraxial Analgesia A Randomized Clinical Trial

Alison G. Cahill, MD, MSCI; Sindhu K. Srinivas, MD, MSCE; Alan T. N. Tita, MD, PhD; Aaron B. Caughey, MD, PhD; Holly E. Richter, PhD, MD; W. Thomas Gregory, MD; Jingxia Liu, PhD; Candice Woolfolk, PhD; David L. Weinstein, MD; Amit M. Mathur, MD; George A. Macones, MD, MSCE; Methodius G. Tuuli, MD, MPH

IMPORTANCE It is unclear whether the timing of second stage pushing efforts affects spontaneous vaginal delivery rates and reduces morbidities





The 5 Ps

- Power = forces
- Passenger = fetus
- Position = occiput
- Passageway = pelvis
- Psyche = your patient and support





Positioning aids- Peanut Ball www.maternalfocus.com -Google images





Pushing a DOP baby

- Hands & Knees or Exaggerated Sims position for DOP
- Encourage pt to hold own thighs to allow for maximal fetal descent
- and maternal comfort.
- Manual rotation when indicated.







- Gone are the days of closed glottis pushing: "take a deep breath and hold it."
- No clinically significant benefit. Research shows benefits of open glottis pushing and discourages closed glottis pushing to maximize oxygenation to mom and fetus.
- Open glottis/physiologic pushing: Bear down when they feel the pressure of UC and hold that effort as long as they can.
- "Do what comes naturally to you."



- Instruct woman to bear down and push towards the pressure sensation she feels likely in her rectum.
- Allow it to be her choice whether or not she holds her breath, avoid telling her to do so.
- Discuss action as similar to abdominal crunch if pt familiar, "curling around their baby."



Encourage pushing for 6-8 seconds per effort, 3-4 times per UC

Avoid counting to 10 with each push, as her breath may not last that long.

 Assess maternal effort/fatigue, fetal station, through a few UCs



Length of 2nd stage

Goal is no more than 2-3 hours for multip vs nullip per ACOG but...

 If FHR tracing remains with moderate variability and maternal efforts are strong, may continue.

Periodic Attending MD/CNM evaluation of progress/descent is vital.

UCSF Perinatal Data, 2012 & ACOG, 2003





Fetal Hear Rate Dilemmas



Implement Intermittent Monitoring for Low-risk Patients

Continuous monitoring:

- Increases the likelihood of cesarean
- Has not been shown to improve neonatal outcomes e.g. reduce rates of CP
- Restricts movement (and normal physiologic processes and coping)
- Potentially reduces nursing interaction/ labor support





AWHONN PRACTICE MONOGRAPH



Fetal Heart Rate Auscultation, 3rd edition

Kirsten Wisner & Carrie Holschuh

Correspondence

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MESH Terms Auscultation

ABSTRACT

The use of intermittent auscultation (IA) for fetal surveillance during labor decreased with the introduction of electronic fetal monitoring (EFM). The increased use of EFM is associated with an increase in cesarean births. IA is an evidencebased method of fetal surveillance during labor for women with low risk pregnancies and considered one component of comprehensive efforts to reduce the primary cesarean rate and promote vaginal birth. Many clinicians are not familiar with IA practice. This practice monograph includes information on IA techniques; interpretation and documentation; clinical decision-making and interventions; communication; education, staffing, legal issues, and strategies to promote implementation of IA into practice.

doi: 10.1016/j.nwh.2018.10.001



Management of Intrapartum Fetal Heart Rate Tracings Number 116, November 2010



*See Table 2 for list of various intrauterine resuscitative measures

Figure 2. Management algorithm for uterine tachystole. Abbreviation: FHR, fetal heart rate.

Intrauterine Resuscitation

- Repositioning side to side/ hands and knees
- IV bolus of at least 500 mL Lactated Ringer's
- Oxygen at 10 L/min via non-rebreather facemask (usually no more than 15-30 min per event)
- Discontinue oxytocin/ remove Cervidil
- Amnioinfusion (1st stage) for deep recurrent variables
- Modification of pushing efforts (second stage)
- Medications
 - Terbutaline (1-2 times)
 - IV pressor if hypotensive/ after epidural placement

UCSF Benioff Children's Hospitals

Fetal indication for cesarean

- Abnormal FHR
 - -Reevaluate in OR
 - -Obtain umbilical artery cord blood gas
 - Delayed cord clamping
- Multidisciplinary review of failed inductions
 - -Improvement opportunities



Appendix Q

Example Algorithm for the Management of Intrapartum Fetal Heart Rate Tracings



This is an example of one possible algorithm to assist the nurse and provider in the management of intrapartum fetal heart rate patterns. It does not cover all possible clinical situations. The algorithm assumes that the abnormal fetal heart rate pattern has been recently recommized, and that the preceding tracing is not already associated with the potential for cimilicant acidemia. The algorithm also

Appendix P

Algorithm for Management of Category II Fetal Heart Rate Tracings



OVD, operative vaginal delivery.

*That have not resolved with appropriate conservative corrective measures, which may include supplemental oxygen, maternal position changes, intravenous fluid administration, correction of hypotension, reduction or discontinuation of uterine stimulation, administration of uterine relaxant, amnioinfusion, and/or changes in second stage breathing and pushing techniques.

TABLE Management of category II fetal heart rate patterns: clarifications for use in algorithm

- Variability refers to predominant baseline FHR pattern (marked, moderate, minimal, absent) during a 30-minute evaluation period, as defined by NICHD.
- 2. Marked variability is considered same as moderate variability for purposes of this algorithm.
- 3. Significant decelerations are defined as any of the following:
 - Variable decelerations lasting longer than 60 seconds and reaching a nadir more than 60 bpm below baseline.
 - Variable decelerations lasting longer than 60 seconds and reaching a nadir less than 60 bpm regardless of the baseline.
 - Any late decelerations of any depth.
 - Any prolonged deceleration, as defined by the NICHD. Due to the broad heterogeneity inherent in this definition, identification of a prolonged deceleration should prompt discontinuation of the algorithm until the deceleration is resolved.
- Application of algorithm may be initially delayed for up to 30 minutes while attempts are made to alleviate category II pattern with conservative therapeutic interventions (eg, correction of hypotension, position change, amnioinfusion, tocolysis, reduction or discontinuation of oxytocin).
- 5. Once a category II FHR pattern is identified, FHR is evaluated and algorithm applied every 30 minutes.
- 6. Any significant change in FHR parameters should result in reapplication of algorithm.
- For category II FHR patterns in which algorithm suggests delivery is indicated, such delivery should ideally be initiated within 30 minutes of decision for cesarean.
- 8. If at any time tracing reverts to category I status, or deteriorates for even a short time to category III status, the algorithm no longer applies. However, algorithm should be reinstituted if category I pattern again reverts to category II.
- 9. In fetus with extreme prematurity, neither significance of certain FHR patterns of concern in more mature fetus (eg, minimal variability) or ability of such fetuses to tolerate intrapartum events leading to certain types of category II patterns are well defined. This algorithm is not intended as guide to management of fetus with extreme prematurity.
- 10. Algorithm may be overridden at any time if, after evaluation of patient, physician believes it is in best interest of the fetus to intervene sooner.

FHR, fetal heart rate; MCHD, Eunice Kennedy Shriver National Institute of Child Health and Human Development.

Clark. Category II FHRT. Am J Obstet Gynecol 2013.

Graphic reprinted with permission

CMQCC Toolkit to Support Vaginal Birth and Reduce Primary Cesareans

33 yo G1P0 @41+1 weeks arrived for IOL



- What procedures/interventions were beneficial
 - AROM, SE placement, Amnioinfusion
- Was there anything else that could have been beneficial?




Comfort measures during labor





<u>"Berkeley Ca Rebozo Workshop with Gena Kirby"</u> by <u>Wendy Kenin</u>, licensed by <u>CC 2.0</u>



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Comfort in Safety

- Safety first
 - Patient belongings on one side of room
 - What if scenarios?
 - Toilet delivery (beds have wheels!)
 - Tub pushing
 - Decel when standing moving
 - SROM out of bed
 - Your side
 - clear path to door, beds free of tangled cords
 - BE TIDY!



Comfort in Safety

- Safety first
 - Patient belongings on one side of room
 - What if scenarios?
 - Toilet delivery (beds have wheels!)
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 - Decel when standing moving
 - SROM out of bed
 - Your side
 - clear path to door, beds free of tangled cords
 - -BE TIDY!



Comfort in YOU!

- Have faith in the skills you do have
- Be one step ahead
- Your presence matters, be in the "room where it happens"
- Keep active labor "active" by actually being active!
- Be positive and trust birth, each story is unique
- Use of body language to gain trust
 - Early and direct eye contact when meeting patient for first time
 - A "feeler" touch with introduction



Comfort in Your Voice

- Clear communication in the moment with birth team re delivery position
 - Conversation with the mum her participation at time of delivery
 - Clear, direct, with an active voice
 - You are doing this...
 - "Let's get up now..." or "We are getting up now and going for a walk"
 - You will have a contraction while sitting on toilet.....
 - When your water breaks the sensation of the contractions will change
 - We don't have babies in the tub!



Comfort in the Room

- Keep the laboring space comfortable
 - Keeping it an active environment
 - Lights on or off
 - Turn position
 - Smells in the room (peppermint as air freshener)
 - Family influencing patient



Comfort Skills

- Breath work (yogis, lamaze, simple breath in breath out, follow my breath
- Relaxation ("with your next breath, relax your forehead")
- Visualization (Magnolia) "what is your baby doing?"
- Hydrotherapy
- Basics-full bladder? Dry mouth? Thirst? Tired?
- Back labor-pressure points in back, hips to thumbs
- Dancing and moving those hips
- Squats (bed, on the floor, pushing)
- •7th inning stretch-GET HER UP AND WALK



Skills that come with time

You gain experience by being present during birth

- Navigating the space which is full of emotions, hormones, and culture
- Partnering with family and doulas
- How to exit the space of birth
- How to take care of yourself physically, emotionally, and spiritually

Learning doesn't stop here!







Our hands are our greatest tool



Resources for You

- <u>The Thinking Woman's Guide to a Better Birth</u> (1999), by Henci Goe
- <u>The Doula Book: How a Trained Labor Companion Can Help You Have a Shorter, Easier, and Healthier Birth</u> (2002), by Marshall H. Klaus, John H. Kennell, and Phyllis H. Klaus
- Optimal Care in Childbirth, The Case for a Physiologic Approach (2012) Henci Goer and Amy Romano (
- <u>The Birth Partner: A Complete Guide to Childbirth for Dads, Doulas, and All Other Labor Companions</u> (3rd edition, 2008), Penny Simkin
- Spiritual Midwifery (4th edition, 2002), Ina May Gaskin
- Ina May's Guide to Childbirth (2003), Ina May Gaskin
- Baby Catcher: Chronicles of a Modern Midwife (2003), Peggy Vincent
- Oxorne Foote Human Labor and Birth (Sixth edition, 2013), Glenn Posner, Amanda Black, Griffith Jones, and Jessica Dy.
- The Labor Progress Handbook: Early Intervention to Treat and Prevent Dystocia (Third Edition, 2011), Penny Simkin and Ruth Ancheta
- When Survivors Give Birth (2004), Penny Simkin
- Call the Midwife a True Story of the Easy End in the 1950s (2007), Jennifer Worth
- Birthing from Within: An Extra-Ordinary Guide to Childbirth Preparation (1998), Pam England and Rob Horowitz



More Resources for You

- Mindful Birthing: Training the Mind, Body, and Heart for Childbirth and Beyond (2012), Nancy Bardacke
- Childbirth Without Fear (1944), Grantly Dick-Read.
- ANYTHING by Michel Odent
- The Business of Being Born (2007)
- <u>http://spinningbabies.com/</u>
- <u>http://optimal-foetal-positioning.co.nz/</u>
- Melzack, R. Pain-an overview. Acta Anaesthesiologica Scandinavica 1999; 43: 880-4.
- Melzack, R. Pain mechanisms: A New Theory. Science 1965; 150: 971-9.
- Trout, K. The neuromatrix theory of pain: implications for selected nonpharmacologic methods of pain relief for labor. JMWH 2004; 49: 482-8.



More Resources for You

- Keep Calm and Labor On poster (Lamaze) <u>https://www.givingbirthwithconfidence.org/blog/keep-calm-and-labor-on-all-you-need-to-know-about-early-labor</u>
- 40 Ways to Help a Laboring Woman <u>http://www.youtube.com/watch?v=SIIZkEyLBeU</u>
- Physical Comfort: Acupressure <u>https://www.youtube.com/watch?v=zsyco4tQ_XI</u>
- Using the Peanut Ball During Labor and Delivery: <u>https://www.youtube.com/watch?v=hSn_BWjL1nw</u>
- Peanut Ball in Labor: <u>https://www.youtube.com/watch?v=WcE7wCNdTW0</u>
- Premier Birth Tool: <u>https://premierbirthtools.com</u>
- Childbirth Connection: <u>http://www.lamaze.org/page/adequate-labor-support-infographic</u>
- Woman Dances to 'Tootsie Roll' to induce labor <u>https://www.youtube.com/watch?v=snnZQxlXaQI</u>
- Mom in labor does the 'Nae Nae <u>https://www.youtube.com/watch?v=8sf-PI93-nU</u>
- Calais-Germain, B., & Vives, P. N. (2012). Preparing for a gentle birth: The pelvis in pregnancy. Rochester, VT, Healing Arts Press
- <u>www.birthtools.org</u> (ACNM website)



Leopold's Manuever

- <u>https://www.gtsimulators.com/Abdominal-Palpation-Model-for-Leopold-Maneuvers-p/he-79820.htm</u>
- http://www.registerednursern.com/leopold-maneuvers-how-to-correctly-performleopold-maneuvers-clinical-nursing-skills/





Safety Concerns: strategies to reduce patient harm



Measuring Outcomes

OPTIMALITY

Immediate skin to skin contact Initiation of breastfeeding







Unexpected newborn outcomes











Unexpected newborn outcomes

Measure	Source/ Supporting Organization(s)	Specifications for Denominator and Numerator	Strengths	Limitations (including data quality issues)	Utility
Healthy Term Newborn, aka Jnexpected Neonatal Complications	•NQF: #0716 •CMQCC	Denominator: Live births at term without preexisting conditions (excludes IUGR, all fetal anomalies and conditions, maternal drug us e) Numerator: Among the denominator, cases with very low Apgars, neonatal transfer, death, major or moderate complications by ICD-9/10 codes some with LOS parameters to guard against over-coding	Collected using administrative data only (no chart review). Serves an important role as a balancing measure to ensure that neonatal outcomes are preserved when working to lower the CS rate	Requires a Neonatal Discharge Diagnosis file linked to a Birth Certificate file to generate all the potential complications and exclusions. It is a complicated set of algorithms to generate the measure	Used wisely in California and by NPIC

Appendix H

Performance Measures Used To Assess Term Neonatal Outcomes (Jan 2016)



No Change in Baby Outcomes: Rate of Unexpected Newborn Complications



Avoid Defensive Medicine: Focus on Quality and Safety

- Protocols and workflows
 - IOL that includes adequate cervical ripening
 - Admission to L&D after onset of active labor – Reduce cascading interventions
 - Standardized Oxytocin Guideline
 - Using NICHD language for FHR interpretation/documentation
 - Avoid errors of miscommunication
 - Standardized intervention protocols
 - Improve timely intervention for fetal distress



Summary

- Applying what is known about: induction of labor, obstetric triage, management of 2nd stage and category 2 FHR tracings is essential to improve quality and support vaginal birth
- Using policies, protocols, and guidelines helps to standardize care and provides an evidence based approach and is useful for audits and case review.
- Vaginal birth is nursing, physician, and system sensitive and can be used as a quality measure for pregnant women





