APGO Basic Clinical Skills Curriculum

Vaginal Delivery

Association of Professors of Gynecology and Obstetrics (APGO)
Undergraduate Medical Education Committee ©2008

Vaginal Delivery

Table of Contents

DESCRIPTION

The normal spontaneous vaginal delivery is a fundamental skill in the intrapartum care of women. The most prevalent approach to training novices in this skill is allowing them to perform deliveries on actual laboring patients under the direct supervision of an experienced practitioner. This teaching approach may lead to poor or incomplete skill acquisition for the novice learner, because it typically occurs in a fast-paced, high-stress learning environment for the learner and may lack standardization of knowledge expectations and procedural steps.

INTENDED LEARNING OUTCOMES

This clinical skills module provides a standardized framework for teaching management of normal vaginal delivery. Following participation in this module, students should demonstrate the following learning outcomes:

1. Describe the three stages of labor
2. Describe the cardinal movements of labor
3. Describe the various types of fetal position
4. Describe the steps of a normal vaginal delivery
5. Properly assess fetal station and position
6. Deliver the fetal head
7. Assess for nuchal cord
8. Deliver the remainder of the body
9. Deliver the placenta
10. Identify cervical and/or perineal lacerations
11. Properly document the delivery procedure

These learning objectives can be met through a combination of self-directed learning and didactics.

BEST PRACTICES

Reliance upon clinical experience as a "gold-standard" for training in vaginal delivery can be limited by several factors, namely, inadequate patient availability, unpredictable emergencies and lack of standardization of training. The alternative to clinical practice is structured skills training using an obstetrical birth simulator. Simulation allows students to learn, make mistakes, and receive feedback in a safe setting (1,2). Although investigations describing the efficacy of these models are limited, available evidence suggests that training novices with these models results in better overall performance and higher levels of confidence in their skills to perform vaginal deliveries (3,4).

Therefore, we suggest that birth simulators be used to teach vaginal delivery skills to medical students.

A number of models for training in vaginal delivery can be purchased from commercial vendors. It is important to note that more realistic (high-fidelity) simulators do not necessarily provide better skills attainment as compared to less-realistic (low-fidelity) simulators (1). Therefore, the selection of an appropriate simulation model should be based on the scope of the learning objectives. For the purpose of medical student training, a low-fidelity simulator is expected to produce equivalent learning outcomes to high-fidelity simulators.

Following completion of appropriate didactic or self-directed background learning, students should participate in a mentored hands-on practice session/lab.

Case Scenario
A 26-year-old gravida 3 para 2 @ 40 2/7 weeks has presented to the triage room on Labor and Delivery. The fetal heart rate is 150 beats per minute. The estimated fetal weight is 3.15 kg (7 lb). The women states she has a strong desire to push and is leaking clear fluid. She has had an uncomplicated prenatal course. She has had 2 vaginal deliveries of 3.6-kg (8-lb) infants.

The student tasks are to:

1. Perform a vaginal exam to determine initial fetal station and position
2. Manage delivery of the infant
3. Manage delivery of the placenta
4. Initiate warming and drying of infant
5. Examine the cervix and perineum for lacerations
6. After completing the delivery, complete a delivery note

CHECKLIST

The following checklist may be used as a component of the training session and/or as a component of a performance assessment as part of an objective structured clinical examination.

	DONE	NOT DONE
Describe the three stages of labor		
Describe the cardinal movements of labor		
Describe the steps of a normal vaginal delivery		
Assess initial fetal station		
Assess initial fetal position		
Protect perineum		
Deliver the fetal head		
Watch for restitution		
Assess for nuchal cord		
Delivery of the anterior shoulder		
Delivery of the posterior shoulder		
Delivery of torso and legs		
Clamp and cut umbilical cord		
Initiate warming and drying of depressed infant		
Deliver the placenta		
Check placenta		
Examine cervix & perineum for lacerations		
Massage fundus appropriately (before or after placenta)		
Delivery type (NSVD)		
Infant weight		
Apgars at 1 and 5 minutes		
Delivery position		
Presence or absence of nuchal cord		

Description of amniotic fluid (presence or absence of meconium)		
Delivery of placenta		
Description of placenta and cord		
Description of lacerations (presence or absence)		
Estimated blood loss		

Sample Delivery Note
NSVD of a live female infant, 3000 gm and Apgars 9/9. Delivered LOA, no nuchal cord, clear fluid. Head delivered atraumatically, body delivered without difficulty. Cord clamped and cut. Baby handed to nurse. Placenta delivered via continuous cord traction. Fundus firm, minimal bleeding. Perineum and vagina inspected – small 2nd degree perineal laceration repaired under local anesthesia with 2-0 and 3-0 vicryl-rapide suture in the usual fashion. Placenta appears intact and grossly normal with 3 vessel cord. Hemostasis noted. EBL 350 cc. No complications.

PERFORMANCE ASSESSMENT

Once adequate practice has been obtained, both with the birth simulators and actual patient encounters, a formal assessment of knowledge and skills can be conducted using the checklist.

This session should include the following components:

1. Standardized case scenario with skills assessment using birth simulator model
2. Materials for student to document delivery procedure note

PRACTICAL TIPS

We recommend that vaginal delivery skills training be introduced to students during the third-year clinical clerkship in Obstetrics and Gynecology. The training/practice session can best be conducted as a skills lab, followed by immediate performance assessment using the checklist. Continued practice should be encouraged during the clerkship. Consideration can be given to conducting a performance assessment as part of an objective structured clinical examination at the end of the obstetrics and gynecology clerkship or at the end of the third year.

RESOURCES

The following is a list of resources that may be helpful in augmenting your didactic presentations in these areas:

Resource Name	Publisher	Cost
8-minute Intrapartum Care Video	**APGO**	FREE
5-minute vaginal delivery video	Operational Medicine	FREE
Normal Vaginal Delivery Tutorial	South Carolina Health Care Simulation	FREE

The following table lists some of the available simulation models and their relative cost.

Model Name	Manufacturer	Cost ($US)
Classic Childbirth Simulator	OB Manikin	500 - 750
MamaNatalie	Laerdal Medical	750
PROMPT Birthing Simulator	Limbs & Things	> 9500
Noelle Maternal and Neonatal Birthing Simulator	Gaumard	> 4000-50,000

1. DeStephano C, Chou B, Patel S, Slattery R, Hueppchen N. A randomized controlled trial of birth simulation for medical students. Am J Obstet Gynecol. 2015; 213:91.e1-7.

2. Deering S, Auguste T, Lockrow E. Obstetric simulation for medical student, resident, and fellow education. Seminars in Perinatology. 2013; 37:143-5.

3. Deering S, Bowen J, Hodor J, Satin AJ. Simulation training and resident performance of Singleton vaginal breech delivery. Obstet Gynecol. 2006; 107(1): 86-89.

4. Jude DC, Gilbert GG, Magrane D. Simulation training in the obstetrics and gynecology clerkship. Am J Obstet Gynecol. 2006; 195:1489-92.