

# Impact of Labor and Delivery Shadowing on Medical Student Interest in Obstetrics and Gynecology

## Introduction

The field of obstetrics and gynecology (OB/GYN) is facing a physician shortage. Half of U.S. counties currently lack a single OB/GYN and workforce projections predict a shortage of 22,000 OB-GYNs by 2050. Increasing medical student interest in the field is an important method of combatting this growing shortage. Published data has suggested the strongest predictor of post-clerkship interest in OB/GYN is pre-clerkship interest in the specialty. One effective means of exposure is preclinical shadowing opportunities in labor and delivery (L&D) departments. However, data describing the impact of such participation on student perspectives towards the field is limited. To investigate this, a structured, student-run L&D shadowing program was created to increase pre-clerkship exposure to OB/GYN to subsequently assess the impact of this experience on student attitudes and interest in the specialty.

## Methods

Scheduling and program support for the shadowing experience was coordinated by student leadership of the American Medical Women's Association chapter at the University of Colorado School of Medicine (CUSOM). Preclinical students at the CUSOM attended one 6-hour evening shadowing shift in the Denver Health Hospital L&D Unit between November 2021 and January 2023. One student was assigned to shadow physicians of the L&D team per evening. A pre-shadowing survey and post-shadowing survey was sent to each participant to: 1) assess how the experience affected perceptions of OB/GYN and 2) collect program feedback. Only students who completed the pre- and post-surveys were included in the final analysis. Paired t-tests were used to compare students' responses between surveys.

## Results

17 students participated in the shadowing experience. The pre-survey and post-survey completion rates were 100% and 94%, respectively. Overall, students rated the program highly, with 94% of participants indicating they would recommend the experience to their peers. There was a small, insignificant increase in students looking forward to their OB/GYN clerkship after the experience ( $p = 0.19$ , Table 1).

## Conclusion/Implications

The results represent a program evaluation of a student-run L&D shadowing program for preclinical medical students at an academic medical center. This program was designed to increase pre-clinical medical student exposure to OB/GYN and provide an early opportunity for career exploration. Through pre- and post- surveys aimed at assessing student attitudes towards OB/GYN, our analysis highlights the potential of such programs to not only promote interest and engagement in the specialty at an earlier timepoint than usual, but also emphasize the role of an interprofessional team in providing care. Students who participated in this program overwhelmingly found the experience to be valuable, demonstrating the feasibility and value of shadowing programs like this. Limitations of our study include small sample size, limited scope, and limited gender inclusion. Future program development includes expansion to other clinical sites, creation of a longer-term preclinical elective, and expansion to include

those with other gender identities. Looking forward, larger implementation would be helpful in evaluating the impact of such programs in promoting interest in OBGYN and combatting the predicted shortage of women's health providers."

**Table 1. Pre-Survey and Post-Survey Responses**

Responses	Number of students (%)		
Female gender	17/17 (100%)		
I have had prior exposure to L&D	3/17 (17.65%)		
Responses	Pre-Survey Score (Out of 5)	Post-Survey Score (Out of 5)	Paired two-tailed t-test p value
I think OB/GYN would fit my interests, goals, and skill sets as a physician	3.94	3.94	1
I have interest in OB/GYN as a medical specialty.	4.00	4.13	0.43
I am looking forward to my OB/GYN clerkship.	4.44	4.63	0.19
Shadowing Experiences	Number of students (%)		
Saw any delivery	7/16 (43.75%)		
Saw vaginal delivery	6/16 (37.5%)		
Saw cesarean section	6/16 (37.5%)		
Saw rounds	4/16 (25%)		
Saw patient in triage	3/16 (18.75%)		
Other	2/16 (12.5%)		
Saw none of the above	0/16 (0%)		
Majority of time with Resident	16/16 (100%)		
Majority of time with Attending	3/16 (18.75%)		
Post-survey on attitudes towards OB/GYN after shadowing	Score (Out of 5)		
This experience enhanced my understanding of L&D	4.5		
This experience was useful for my medical education and/or career	4.56		
I would recommend this experience to other medical students	4.69		
This experience altered my opinion of OB/GYN in a positive way	3.94		
What experiences do you wish you were able to observe?	Number of students (%)		
Vaginal delivery	12/16 (75%)		
Cesarean section	11/16 (68.75%)		
Rounds	5/16 (31.25%)		
Triage	4/16 (25%)		
Other	0/16 (0%)		
What factor(s) altered your opinion of OB/GYN in a positive way?	Number of students (%)	Representative Quotes	
Exposure to the field	9/16 (56.25%)	"This is the first shadowing experience I have had as a medical student where I was welcomed to participate in the OR rather than told to watch from the corner and it was a really meaningful experience."	
Interactions with the team	8/16 (50%)	"I LOVED my resident [...]. She was super friendly and helped teach me even when there wasn't much time to do so. I learned a lot from her and from the entire team and would love to shadow again in the future."	
Culture	7/16 (43.75%)	"Wonderful experience to understand the culture and practices of physicians in labor and delivery. Very much enhanced my interest in the field and helped me contextualize what I was learning in class. Was also helpful in helping me decide that while I find the field very interesting and am more informed about the need in the field, I think my skill set would be better suited in a different field."	
Other	0/16 (0%)		