

Background

- Ultrasound training is a vital component of maternal-fetal medicine (MFM) fellowships in the United States, yet the experience and degree of hands-on training differs among fellowship programs.

Objective

- We aimed to assess the current maternal-fetal medicine (MFM) ultrasound training experience during fellowship.

Methods

- An anonymous survey of 51 questions was created using Research Electronic Data Capture (REDCap) and distributed to postgraduate year (PGY)-6 MFM fellows registered to attend the annual Gottesfeld-Hohler Memorial Foundation MFM Fellow Ultrasound Training Course prior to the conference (n=114).
- The survey included continuous, ordinal and categorical scale questions on demographics of the program, ultrasound training structure, fellows’ self-perception of ultrasound capabilities, research, mentorship and technical aspects of sonography.
- Categorical outcomes were compared using chi-square test and Fischer’s exact test as appropriate, and linear regression analysis was performed for evaluation of correlation between variables.

Results

- Seventy-two PGY-6 fellows completed the survey (96% response rate), with the following geographic distribution: 10 (13.9%) West, 16 (22.2%) Midwest, 17 (23.6%) South, 29 (40.3%) Northeast.
- Fellows undergoing training in the South were less likely to report feeling comfortable performing detailed anatomic surveys and nuchal translucency (NT), when compared to other regions (NT: p=0.046; anatomy: p=0.011).
- The majority of fellows reported feeling comfortable performing growth U/S (78%) and uterine artery Doppler interrogations (58%), and feeling uncomfortable with 3D U/S, neurosonography and fetal echocardiography.
- Fellows in the Northeast were more likely to report feeling comfortable performing chorionic villus sampling (CVS) when compared to other regions (p=0.001).
- There was no difference among fellowship programs in ultrasound curriculum, bedside teaching, ultrasound-focused research mentorship or months of ultrasound training.

Conclusion

- There is wide geographic variation in independent performance and comfort with ultrasound and diagnostic procedures in maternal-fetal medicine fellowship in the United States.
- This study highlights the need for further optimization of MFM fellowship ultrasound training, especially in advanced sonography and diagnostic procedures.

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Questions?

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Figure 1. Descriptive Characteristics of MFM Fellowship Programs

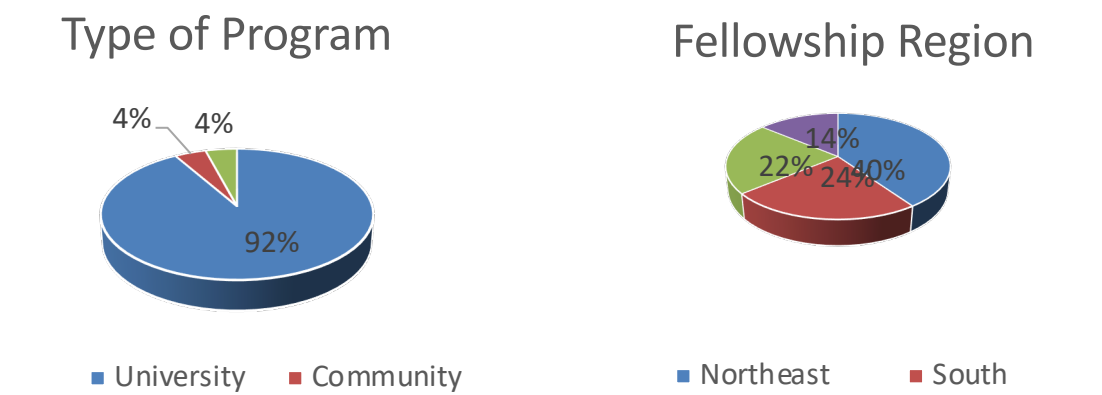


Table 1. Fellows’ Self-reported Comfort Level with Types of Ultrasound Examinations

	All participating programs (n=72)	Northeast (including mid-Atlantic States) (n=29)	South (including Texas and Florida) (n=17)	Mid-West (n=16)	West (including Alaska and Hawaii) (n=10)	p-value†
Anatomy						
Comfortable	54 (75%)	23 (79.3%)	9 (52.9%)	15 (93.8%)	7 (70%)	0.046
Not Comfortable	18 (25%)	6 (20.7%)	8 (47.1%)	1 (6.2%)	3 (30%)	
Growth						
Comfortable	56 (77.8%)	24 (82.8%)	9 (52.9%)	14 (87.5%)	9 (90%)	0.065
Not Comfortable	16 (22.2%)	5 (17.2%)	8 (47.1%)	2 (12.5%)	1 (10%)	
U/A Dopplers						
Comfortable	42 (58.3%)	20 (69%)	7 (41.2%)	10 (62.5%)	5 (50%)	0.291
Not Comfortable	30 (41.7%)	9 (31%)	10 (58.8%)	6 (37.5%)	5 (50%)	
MCA Dopplers						
Comfortable	15 (20.8%)	8 (27.6%)	3 (17.6%)	2 (12.5%)	2 (20%)	0.688
Not Comfortable	57 (79.2%)	21 (72.4%)	14 (82.4%)	14 (87.5%)	8 (80%)	
NT						
Comfortable	39 (54.2%)	20 (69%)	4 (23.5%)	11 (68.8%)	4 (40%)	0.011
Not Comfortable	33 (45.8%)	9 (31%)	13 (76.5%)	5 (31.2%)	6 (60%)	
3D/4D Ultrasound						
Comfortable	11 (15.3%)	5 (17.2%)	1 (5.9%)	3 (18.8%)	2 (20%)	0.699
Not Comfortable	61 (84.7%)	24 (82.8%)	16 (94.1%)	13 (81.2%)	8 (80%)	
Fetal Echocardiography						
Comfortable	7 (9.7%)	2 (6.9%)	3 (17.6%)	1 (6.2%)	1 (10%)	0.668
Not Comfortable	65 (90.3%)	27 (93.1%)	14 (82.4%)	15 (93.8%)	9 (90%)	
Fetal Neurosonography						
Comfortable	17 (23.6%)	6 (20.7%)	3 (17.6%)	5 (31.2%)	3 (30%)	0.751
Not Comfortable	55 (76.4%)	23 (79.3%)	14 (82.4%)	11 (68.8%)	7 (70%)	
Cervical Length						
Comfortable	65 (90.3%)	28 (96.6%)	13 (76.5%)	14 (87.5%)	10 (100%)	0.111
Not Comfortable	7 (9.7%)	1 (3.4%)	4 (23.5%)	2 (12.5%)	0 (0%)	
GYN Ultrasound						
Comfortable	43 (59.7%)	18 (62.1%)	8 (47.1%)	11 (68.8%)	6 (60%)	0.643
Not Comfortable	29 (40.3%)	11 (37.9%)	9 (52.9%)	5 (31.2%)	4 (40%)	

†Chi-square and Fisher’s exact if n<5.

Table 2. Fellows’ Self-reported Comfort Level with Types of Diagnostic Procedures*

	All participating programs (n=72)	Northeast (including mid-Atlantic States) (n=29)	South (including Texas and Florida) (n=17)	Mid-West (n=16)	West (including Alaska and Hawaii) (n=10)	p-value†
Amniocentesis	35 (48.6%)	14 (48.3%)	8 (47.1%)	9 (56.3%)	4 (40%)	0.902
CVS	28 (38.8%)	19 (65.5%)	3 (17.6%)	5 (31.3%)	1 (10%)	0.001
CVS Training Programs	29 (40.2%)	16 (55.2%)	6 (35.3%)	5 (31.3%)	2 (20%)	0.184

*Represented are fellows who reported feeling comfortable with listed procedure and who does have CVS training program

†Chi-square and Fisher’s exact if n<5.