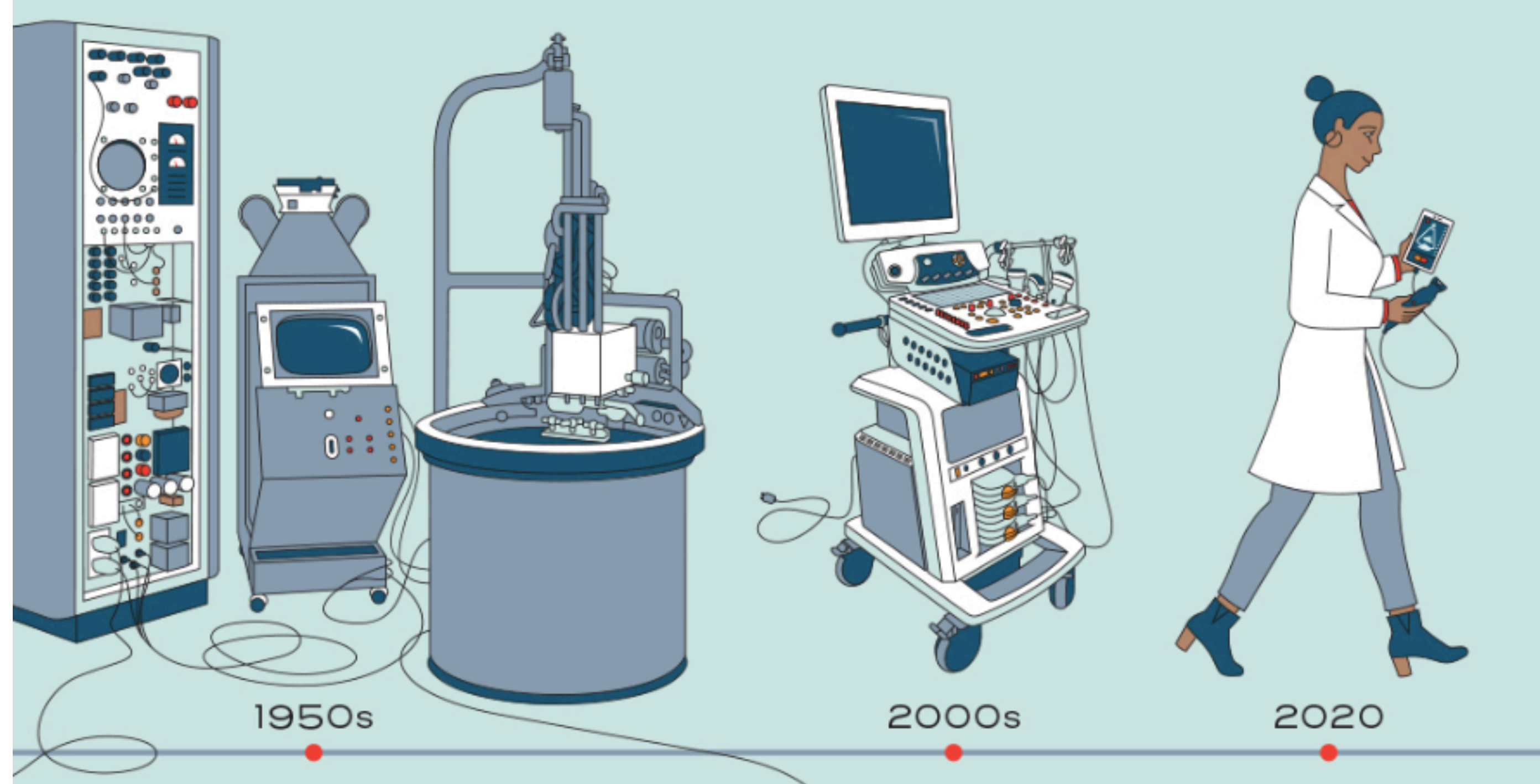


Gary R. Kersbergen MS II, Kari Koch MD, Christina Lincoln DO

Introduction

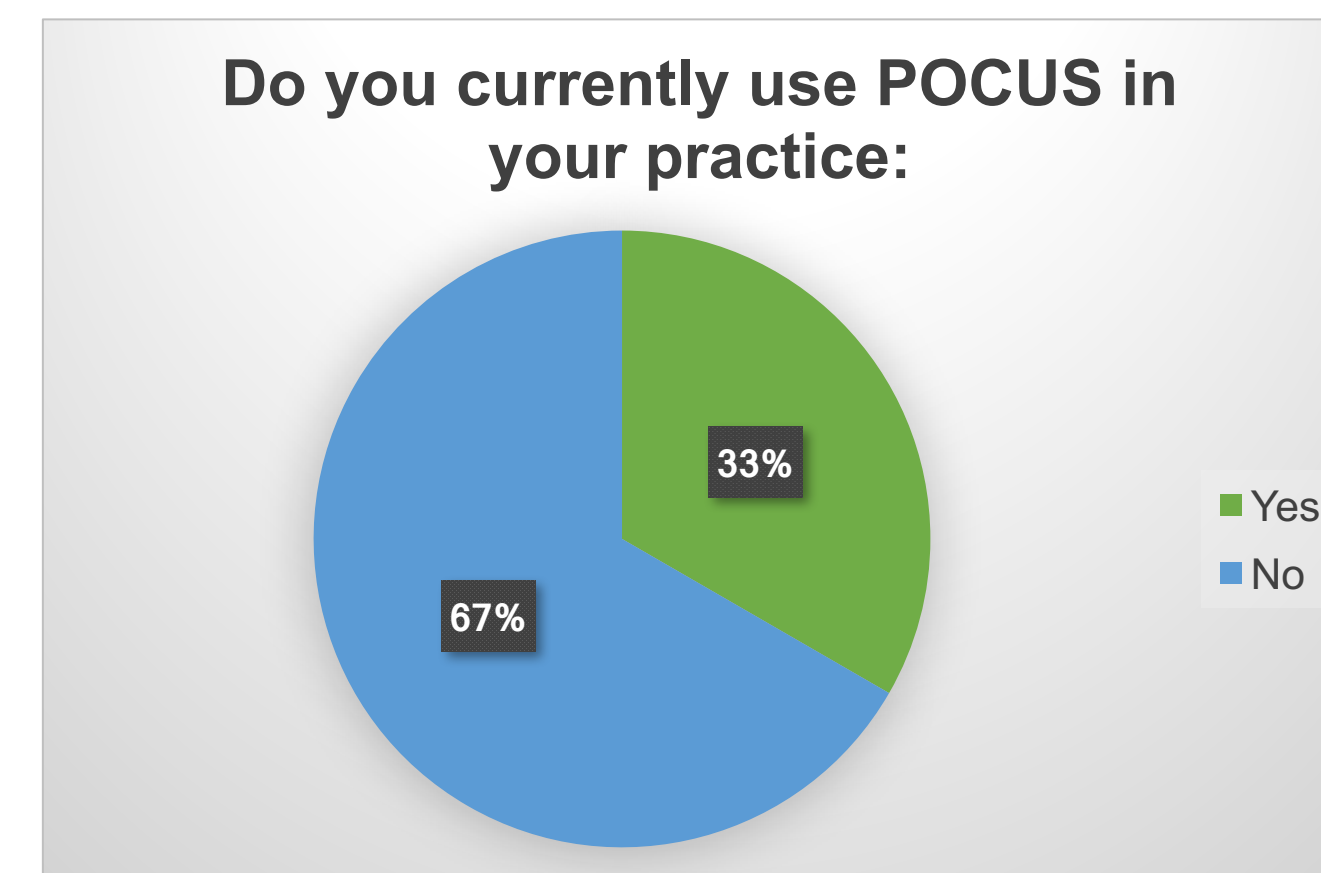
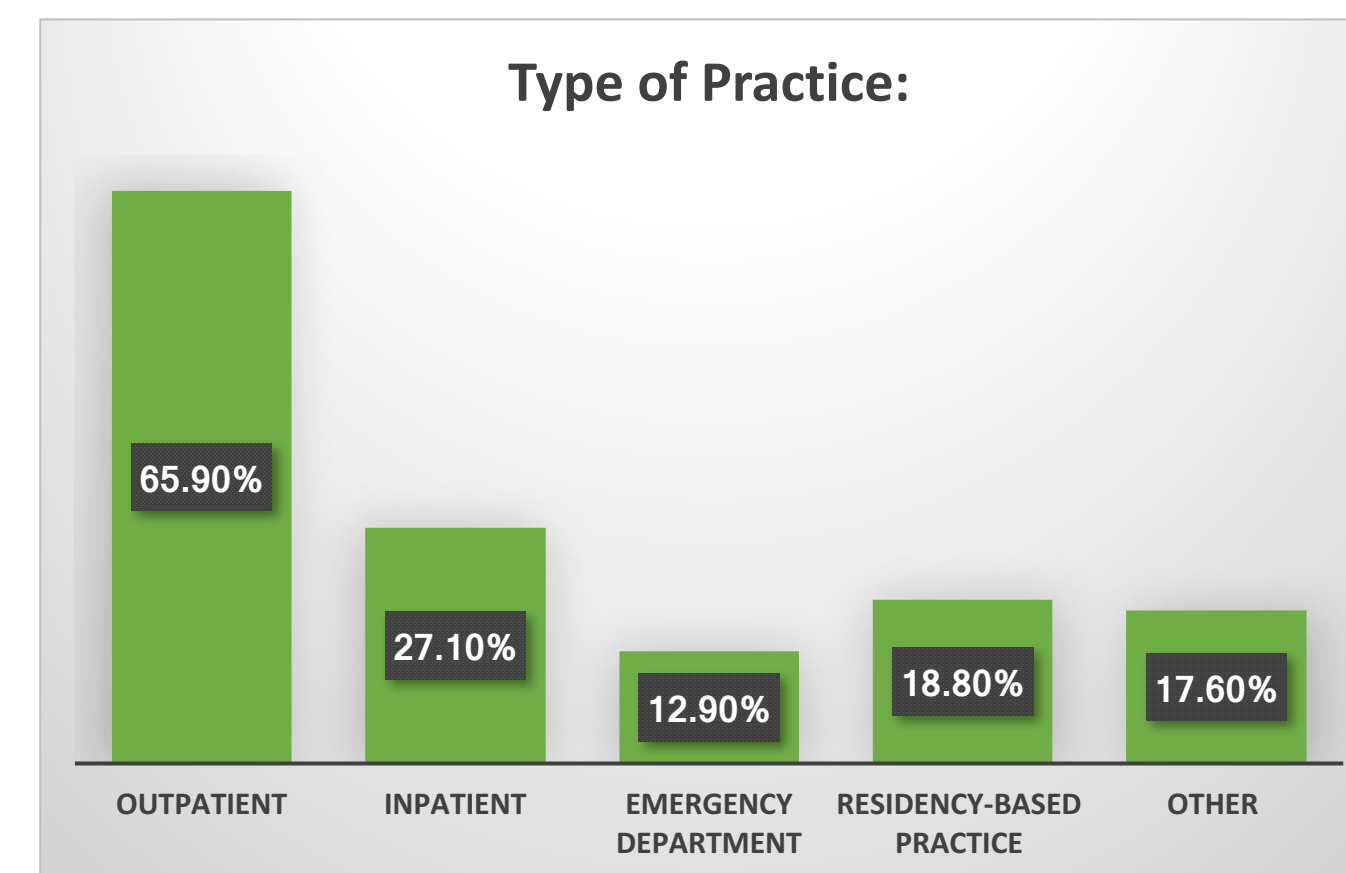
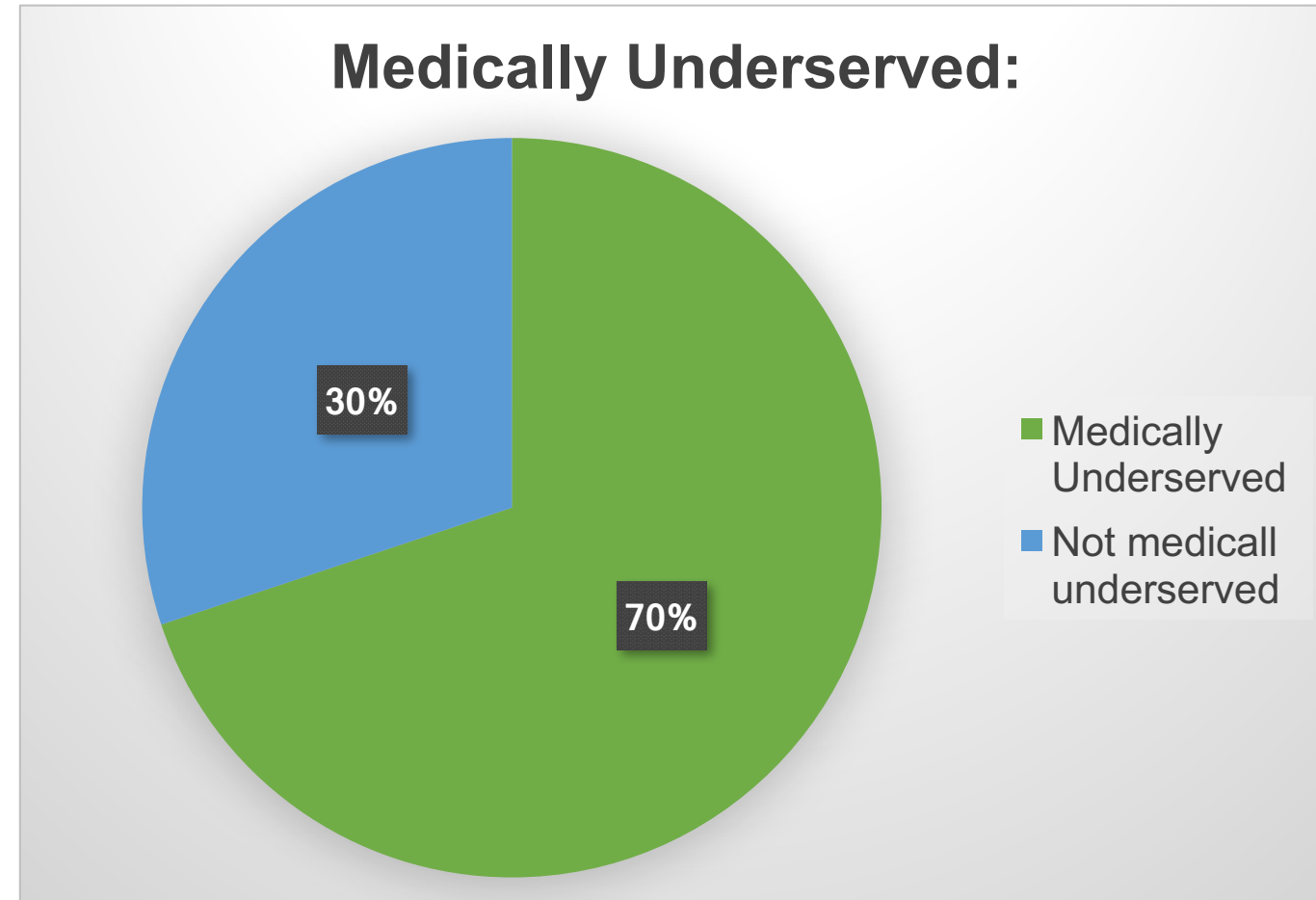
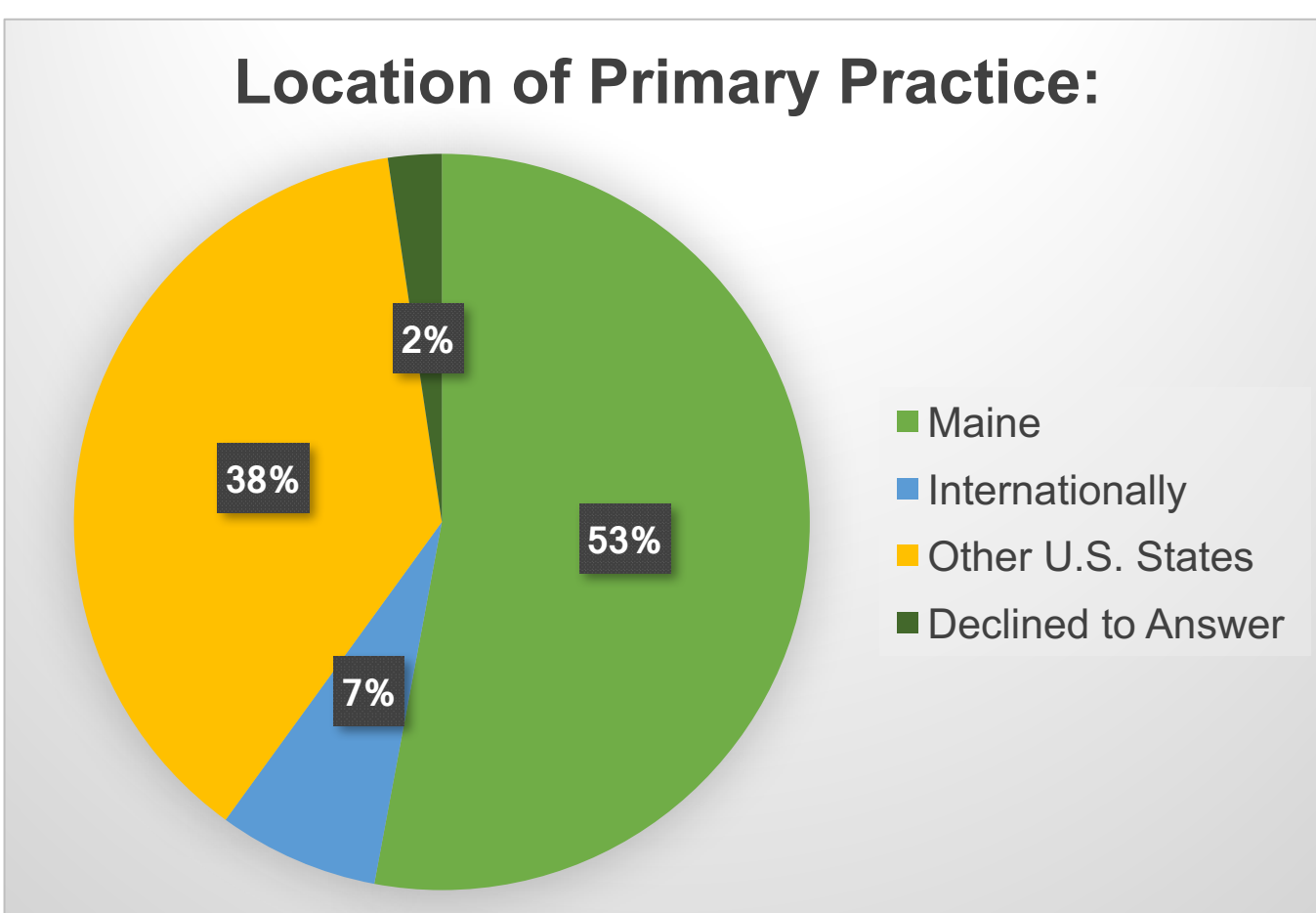
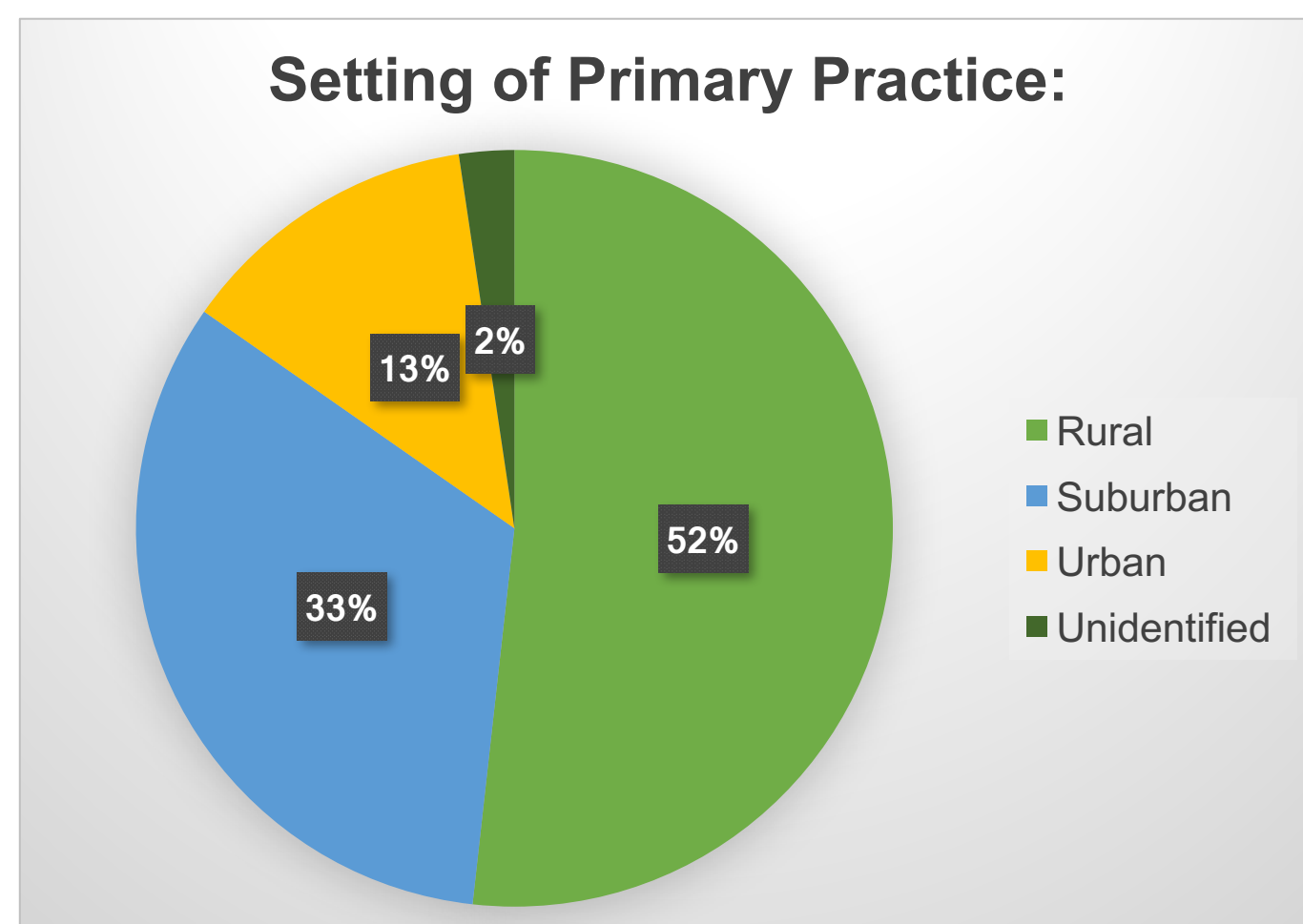
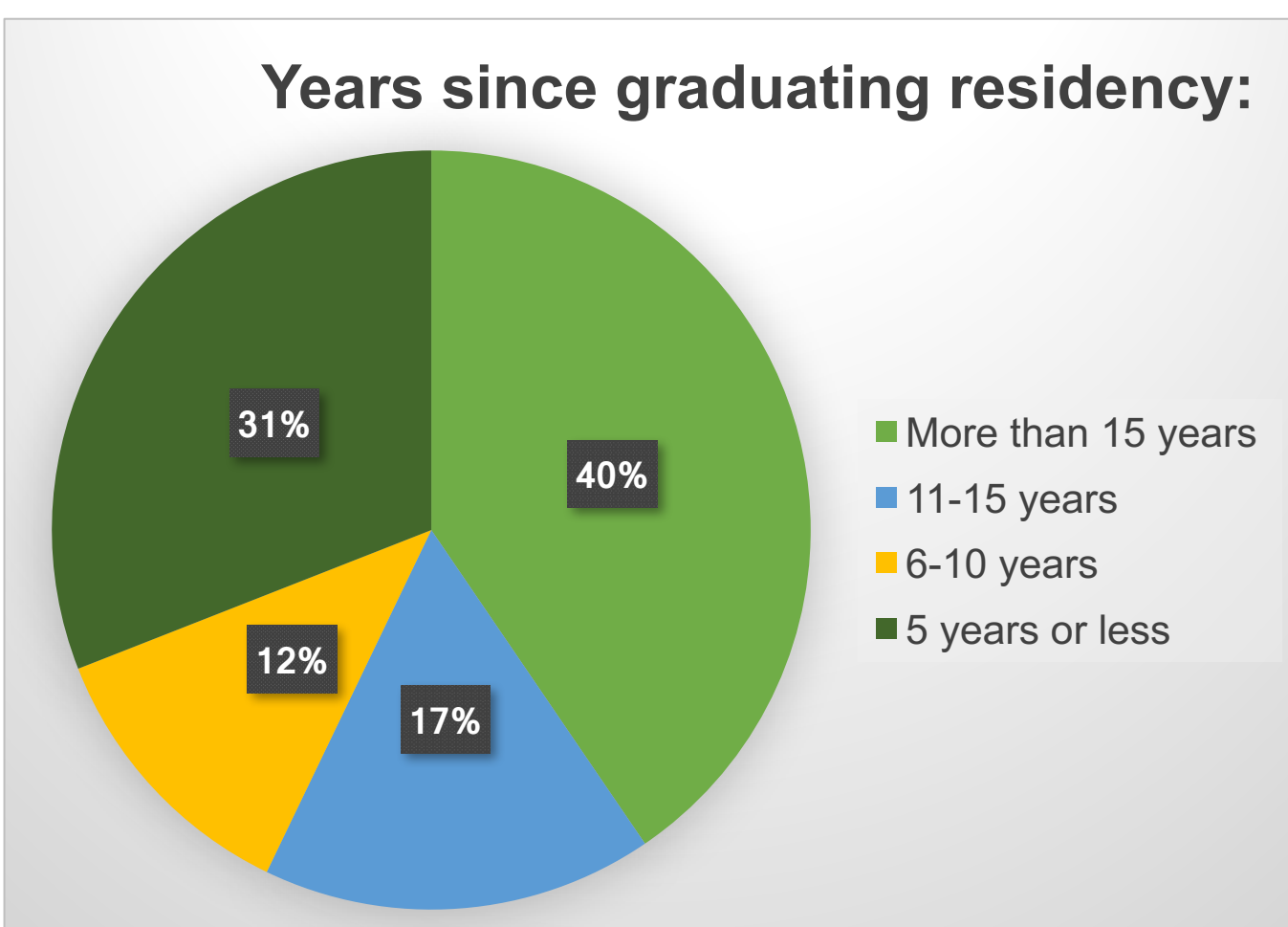


This project aims to address the increasing utility and need for point of care ultrasound (POCUS) training in family medicine residencies by conducting a POCUS-based survey in order to better understand current utilization and barriers for POCUS use among graduates of the Maine-Dartmouth Family Medicine Residency (MDFMR). We wanted to determine the ways in which providers use POCUS in their clinical practice, frequency of use, and which specific POCUS studies would be most useful for them for their patients. Additionally, we wanted to identify current barriers that prevent MDFMR graduates from using POCUS in their practice in order to determine how best to overcome those barriers. In our study, we paid particular attention to the usefulness of POCUS in outpatient settings for rural and medically underserved communities, as POCUS has shown to have particular utility to physicians working in such settings.

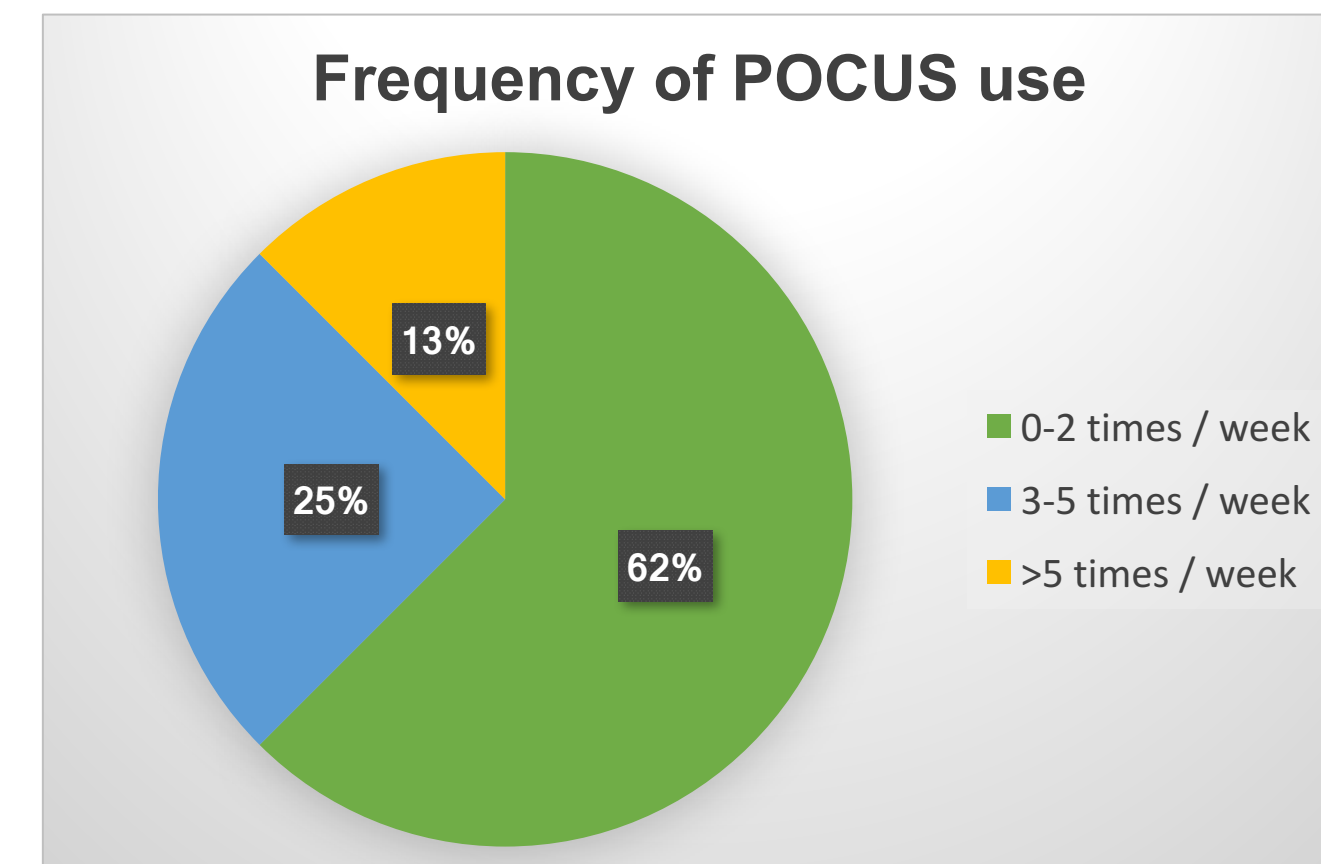
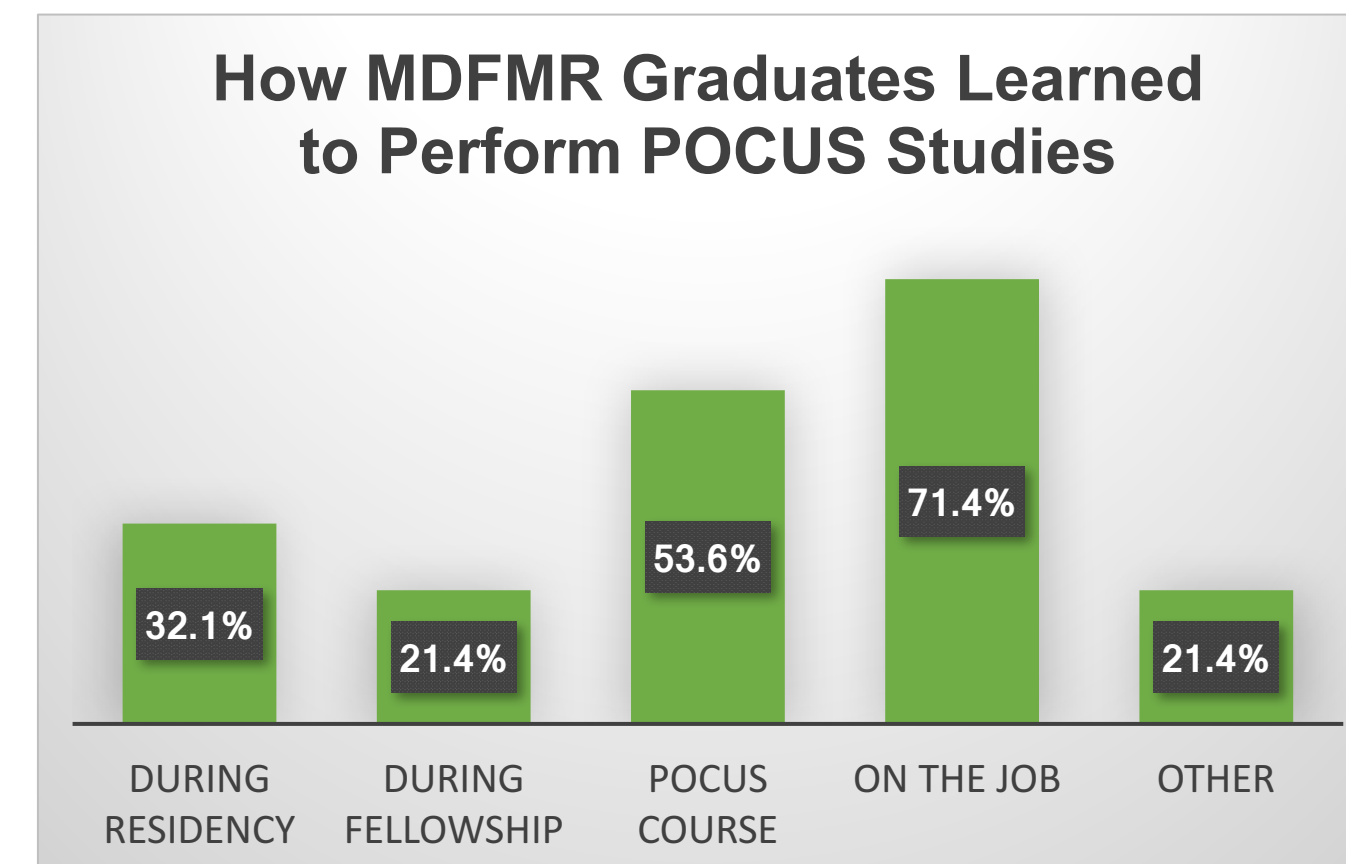
Methods

After referencing the available literature on POCUS use in Family Medicine, we generated a survey asking graduates of the MDFMR to identify specific POCUS studies that they use in their practice, the frequency of their use of POCUS, and where they learned how to perform the POCUS studies that they identified. We also asked that they identify what they think would be the most useful POCUS studies to incorporate into residency training, and the barriers that they face to utilizing POCUS in their practice. We generated a 6-question multiple choice survey using Qualtrics XM, and sent that survey to graduates of the MDFMR. Respondents were grouped into categories based on where they work; rural, suburban, urban, and / or a medically underserved region. Additionally, we asked respondents to identify the setting that they deliver care in, including outpatient, inpatient, residency-based practice, or emergency department care.

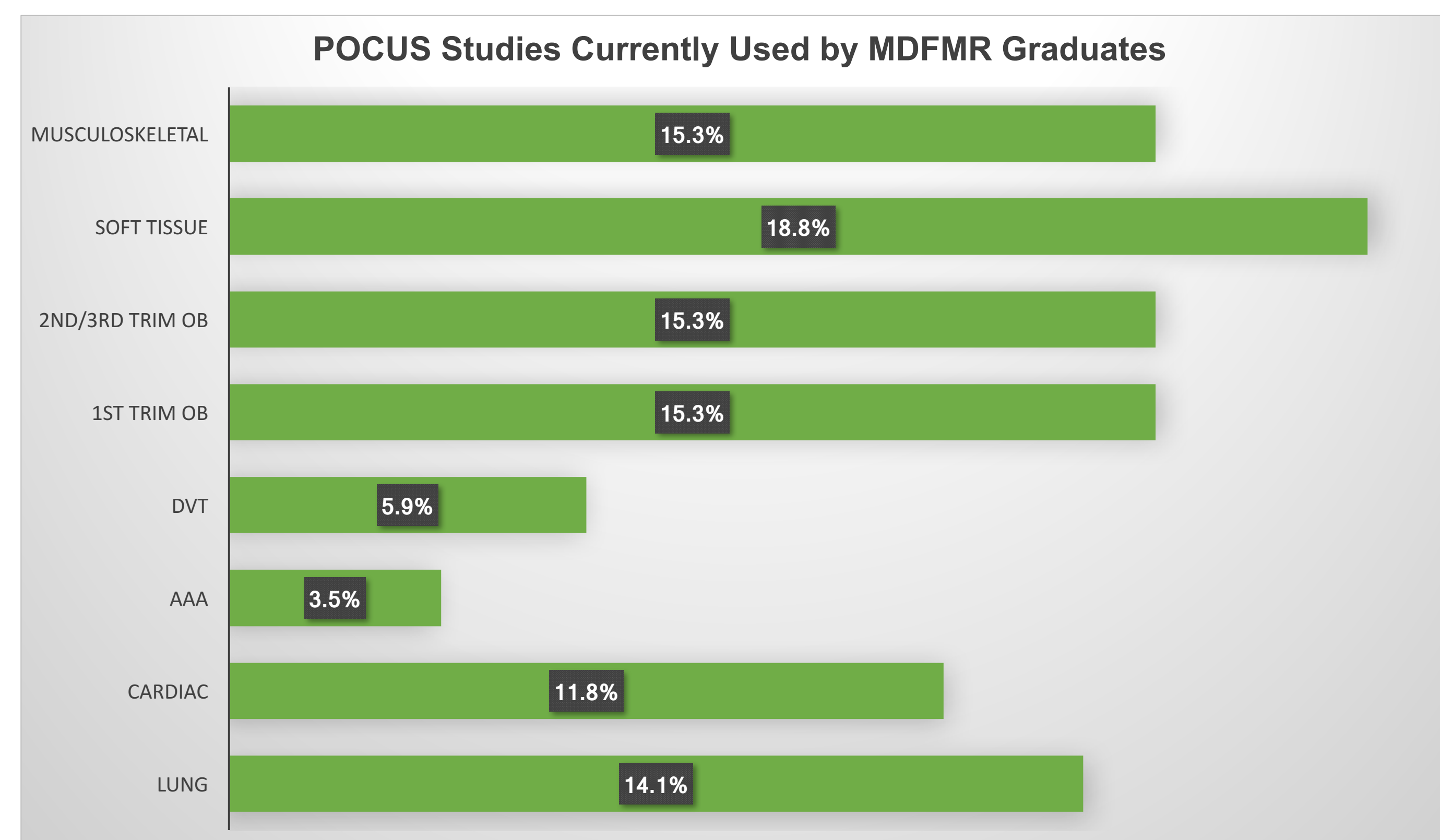
Results



344 emails were sent with 85 total responses received (24.7% response rate.) We identified 28 respondents who are currently using POCUS.



We asked the 28 respondents who use POCUS how frequently they use POCUS in their practice and where they learned their POCUS skills.



* Other responses listed by survey participants included peripheral vascular Doppler, FAST, nerve blocks, IV lines / vascular access, and paracentesis

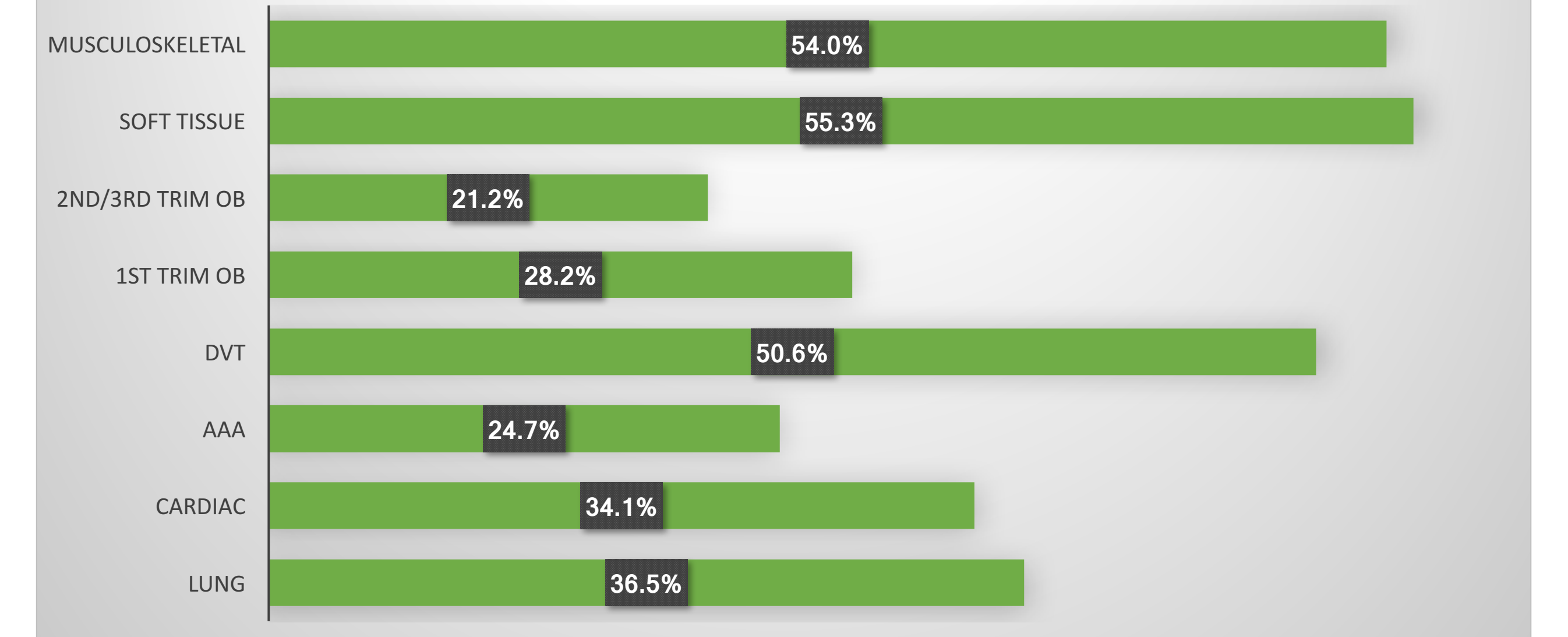
Type of POCUS Study	All	Rural	Maine	Outpatient	Inpatient
Lung	14.1%	25.0%	13.3%	14.3%	26.1%
Cardiac	11.8%	22.7%	15.5%	8.9%	17.4%
AAA	3.5%	4.5%	0.0%	1.8%	0.0%
DVT	5.9%	11.4%	0.0%	3.6%	13.0%
1st Trim OB	15.3%	20.4%	17.8%	17.9%	21.7%
2nd/3rd Trim OB	15.3%	22.7%	24.4%	16.1%	26.1%
Soft Tissue	18.8%	29.6%	22.2%	17.9%	39.1%
Musculoskeletal	15.3%	22.7%	17.8%	12.5%	21.7%

Respondents indicated which POCUS studies they currently perform in their practice in order to determine the most frequently used POCUS studies among residency graduates.

Acknowledgements

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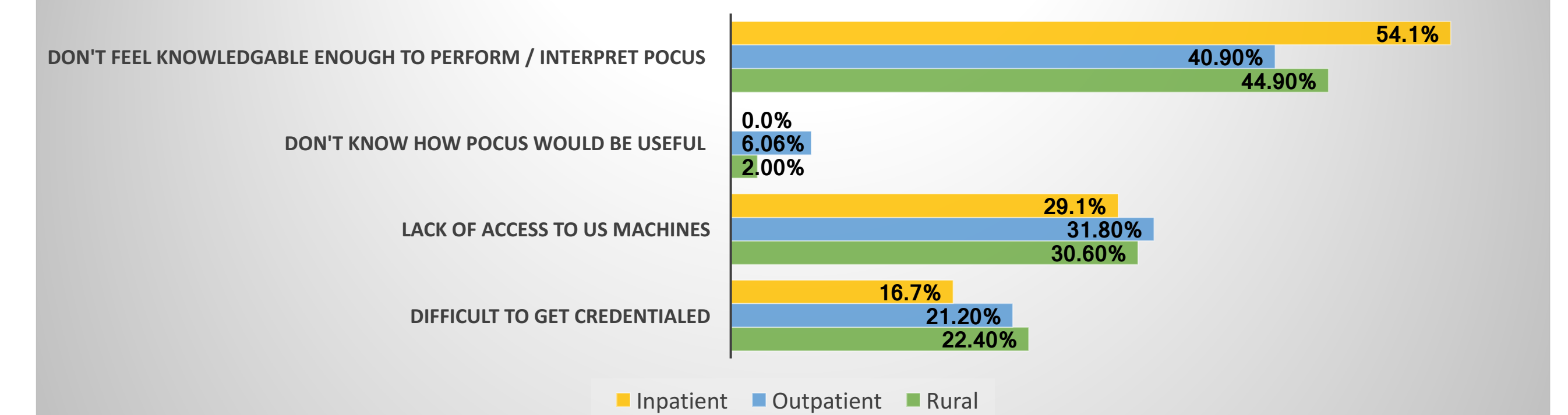
Most Useful POCUS Skills to Learn Indicated by MDFMR Graduates



* Other responses listed by survey participants included abdominal US, FAST, vascular access, and confirmation of IUD placement

Type of POCUS Study	All	Rural	Maine	Outpatient	Inpatient
Lung	36.5%	43.2%	37.8%	32.1%	73.9%
Cardiac	34.1%	40.9%	35.6%	30.3%	65.2%
AAA	24.7%	20.4%	24.4%	23.2%	17.4%
DVT	50.6%	50.0%	46.7%	48.2%	56.5%
1st Trim OB	28.2%	31.8%	24.4%	26.8%	17.4%
2nd/3rd Trim OB	21.2%	27.3%	22.2%	17.8%	17.4%
Soft Tissue	55.3%	63.6%	60.0%	58.9%	65.2%
Musculoskeletal	54.0%	52.3%	53.3%	60.7%	47.8%

Barriers to POCUS Use Indicated by MDFMR Graduates



All respondents were asked indicated which POCUS studies they thought would be the most useful to them in their current practice, and what current barriers are in place.

Discussion:

We created this survey to better understand the utilization of POCUS among graduates of the MDFMR, and to determine which POCUS studies would be most useful to graduates, and what current barriers are in place to using POCUS in their practice.

- Of the 85 respondents surveyed, 33% currently use POCUS in their regular practice, and 70% report working in a medically underserved area.
- The most utilized skills among all respondents were Obstetric, Soft Tissue and Musculoskeletal (MSK.) AAA and DVT screenings were the least utilized.
- Providers identified MSK, Soft Tissue, and Deep Vein Thrombosis (DVT) scans as the top three POCUS skills they would most like to learn.
- These trends were consistent across outpatient settings regardless of location, rural/urban/suburban or medically underserved regions. Inpatient providers identified Cardiac, Lung, and Soft Tissue as their priority
- Current barriers to POCUS use in practice are primarily a lack of knowledge of how to perform and interpret POCUS, a lack of access to ultrasound machines, and challenges in getting credentialed.

Limitations:

- This survey was limited by a small respondent size of 85 graduates of one residency program, although there was broad diversity of practice types, locations, and time since training among the respondents.
- We also noted that OB ultrasound was a less desired skill, though this may be due to low rates of graduates who actively practice OB, which we did not query.
- When asking what skills the respondents would be most interested in, we did not limit their responses. The data would likely have been more useful if we had limited responses to top three choices