Needs Assessment of a Minimally Invasive Gynecologic Surgery (MIGS) Curriculum: Perspectives of Recent OB/GYN Graduates

Leah Bode BS, **Alexandra Dadrat MD, MS**, Sara Spielman MD, MaKayla Picklesimer MPH, CCRP, Colette Gnade MD, Adeoti Oshinowo MD, MPH

INDIANA UNIVERSITY
SCHOOL OF MEDICINE

OB/GYN

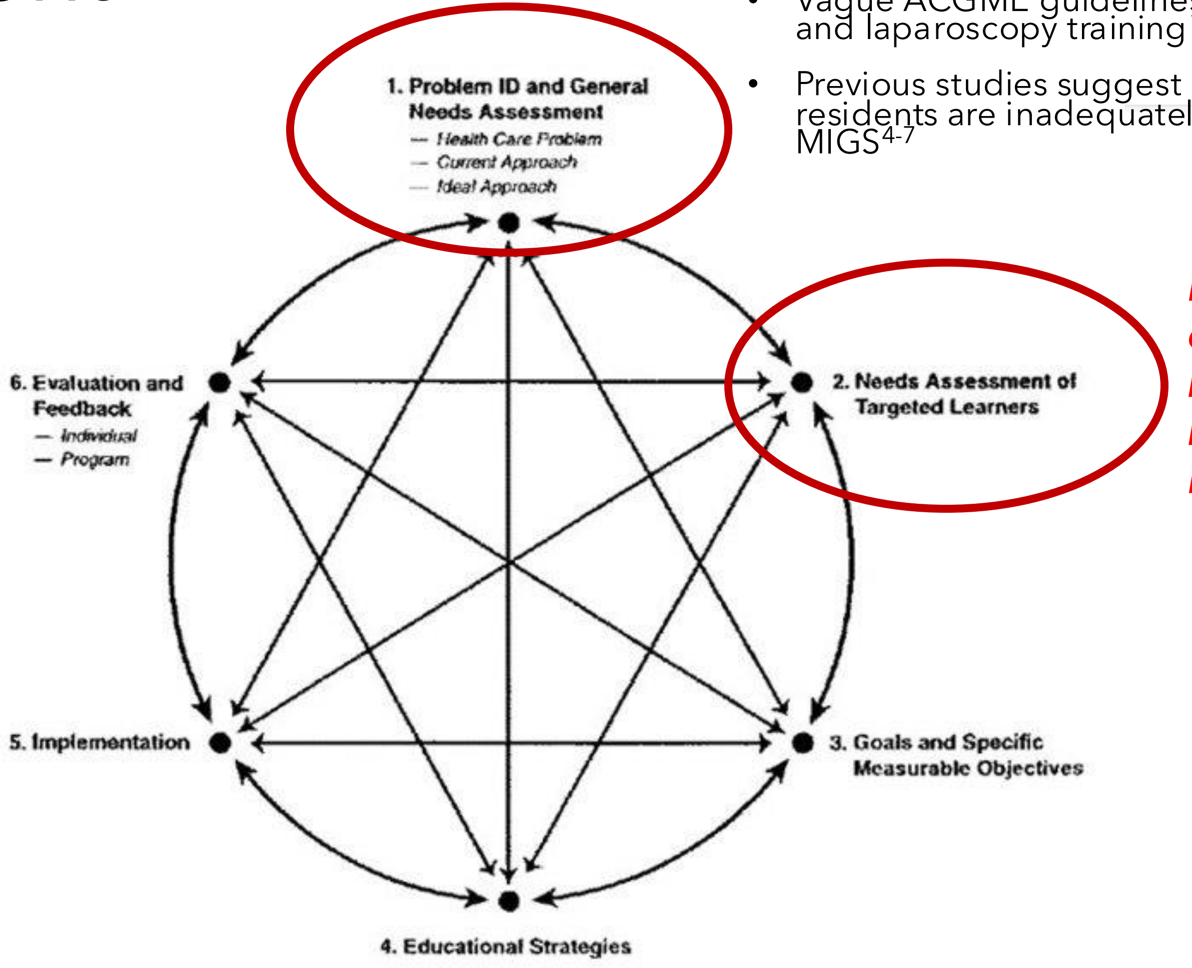
Background

- ACGME milestones for endoscopy and laparoscopy training are vague and do not provide formal national guidelines outlining the scope, depth, or format of MIGS instruction during residency[1-2]
- The Fellowship in MIGS (FMIGS) curriculum is more detailed, but often there is no overlap in resident and fellow didactics or training[3-4]
- Previous studies suggest OB/GYN residents are inadequately trained in MIGS[5-9]

What are the perceived strengths and weaknesses of our current MIGS curricula from the viewpoint of those who recently completed their OB/GYN training?

Kern's 6 Step Approach to Curriculum Development[3]

- Vague ACGME guidelines for endoscopy and laparoscopy training[1-2]
- Previous studies suggest OB/GYN residents are inadequately trained in MIGS[4-7]



Evaluate the experience of recent IUSM OB/GYN residents and assess need for enhanced MIGS curriculum

Methods

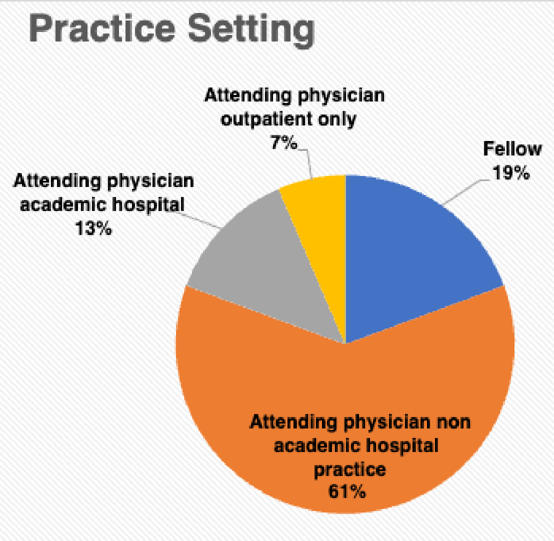
- Surveyed IUSM OB/GYN residency and fellowship graduates from 2018-2022 (N=51)

- Cross-sectional analysis
  - Likert-type items:
    - Satisfaction with the curriculum
    - Confidence in robotic and laparoscopic skills
    - Frequency of skills simulation in residency
    - Confidence in performing various hysterectomy methods as lead surgeon
    - Current MIGS utilization in current practice
  - Open ended questions

- Bivariate analysis, Pearson correlation, and thematic analysis of open-ended questions

Results - Demographics

- 28 responses (55%)



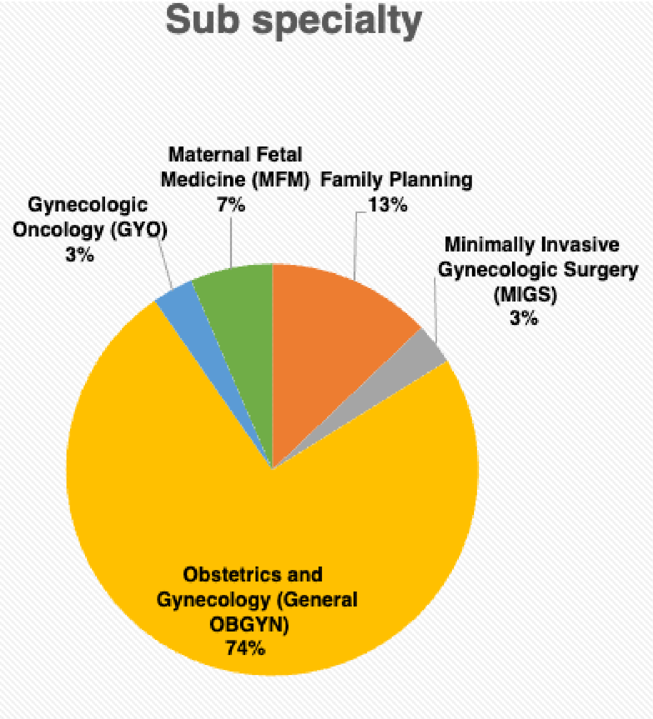
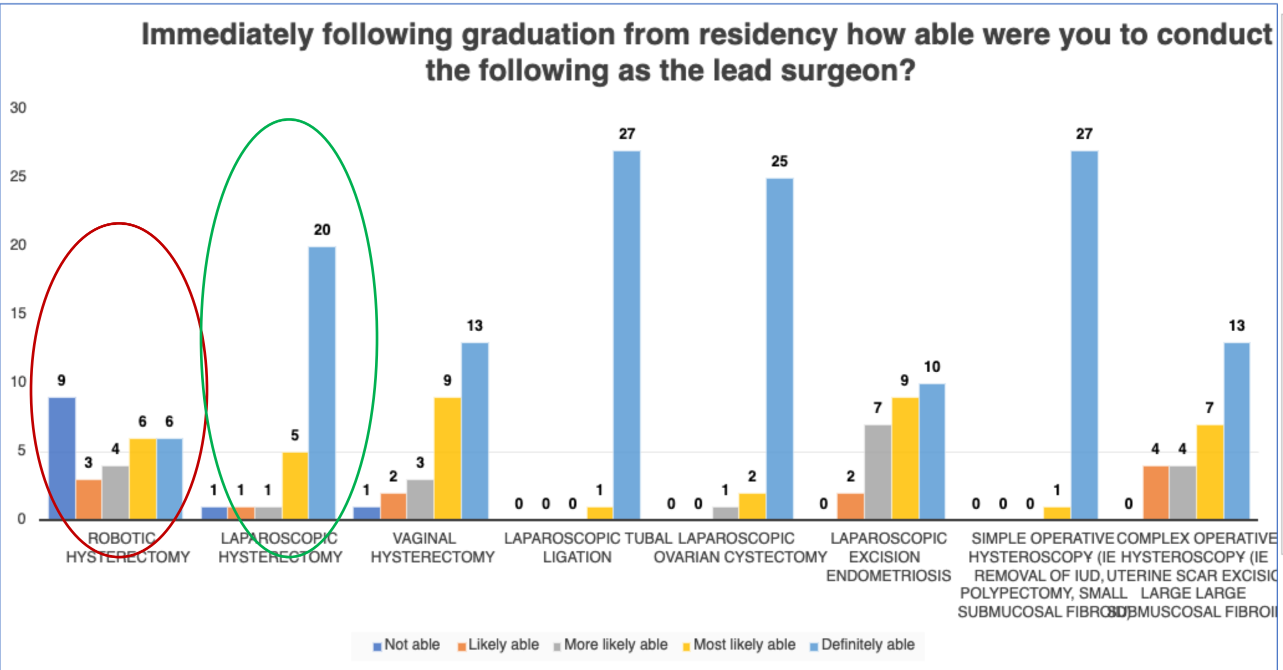
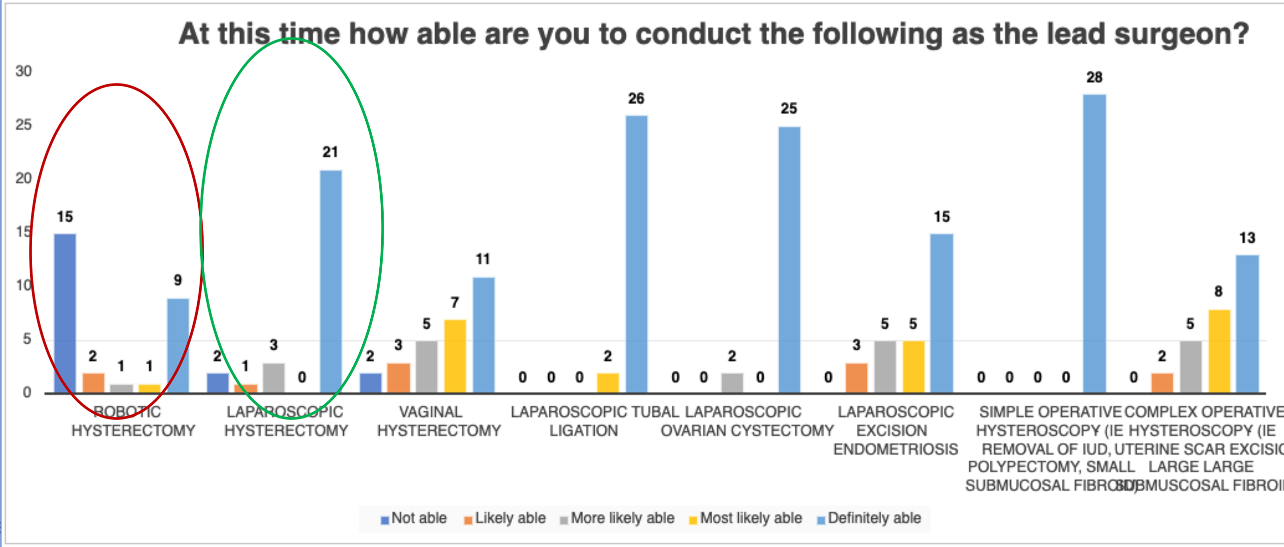


Table 1. Demographics	
Race	
Black or African American	4
White	15
Asian	2
Mixed Race	2
Other	2
Preferred not to respond	3
Ethnicity	
Hispanic, LatinX, or of Spanish Origin	2
No	23
Prefer not to respond	3
Gender Identity	
Female	22
Male	3
Prefer not to respond	3
Fellowship	
Yes	2
No	24
Complete Residency	
Before 2018	1
2018	7
2019	5
2020	7
2021	6
2022	5
Age	
Mean (SD) Age, Years	36.6 (3.4)
Range	28-43

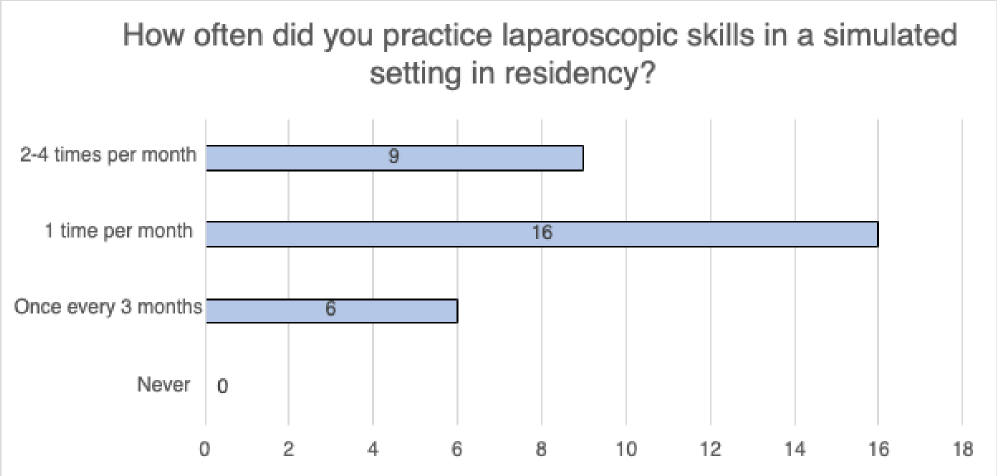
Results – Perceived Ability

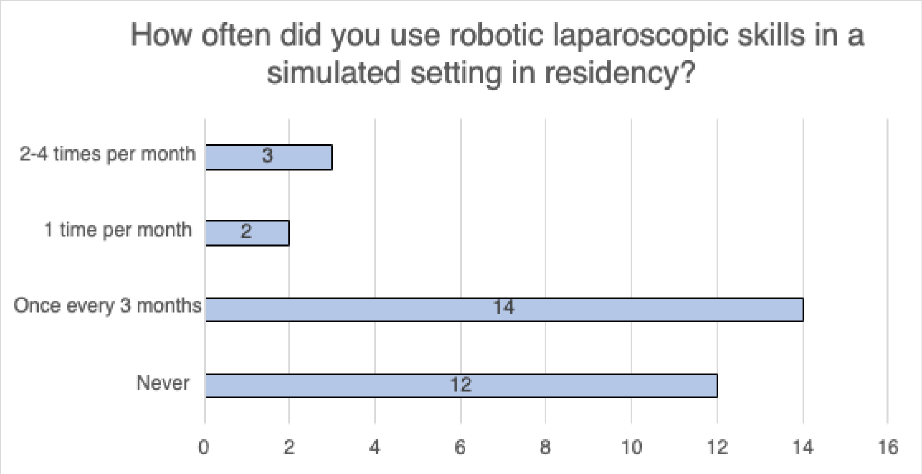
- 70% felt adequately prepared to perform laparoscopic hysterectomy
- 28% felt prepared for robotic surgery post-graduation

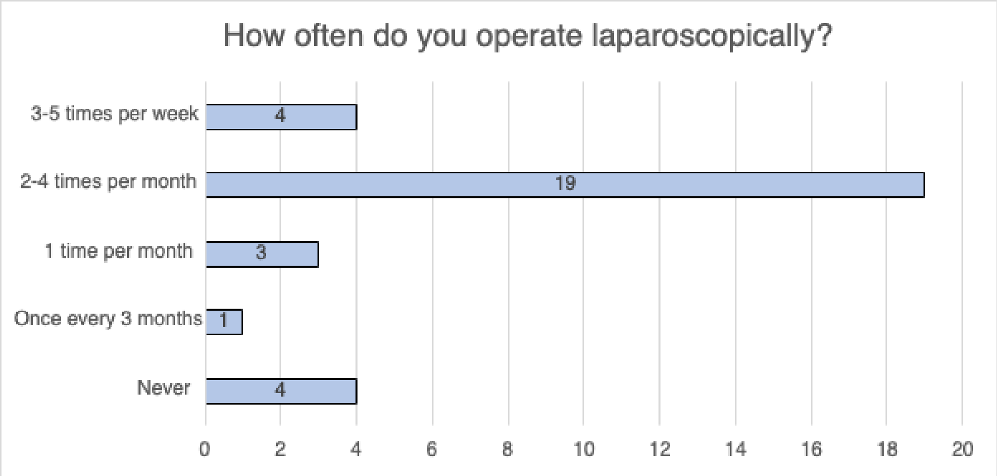


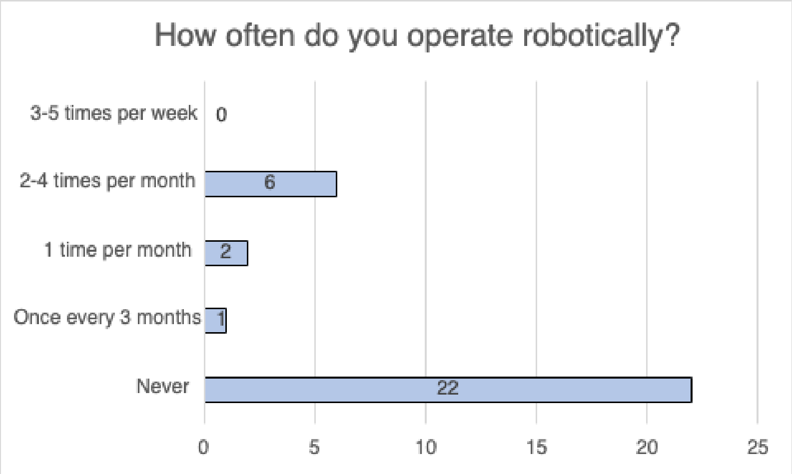


Results – Use of Laparoscopic vs. Robotic Skills









Results – Certification

- Most trainees (74%) expressed interest in robotic certification if readily available

Would you have gotten a robotics certification prior to completion of training if that was more readily available to you?	
Yes	23
Unsure	2
No	6

Results – Team Dynamics

- A strong positive correlation ($r=.63$, $p < .0001$) existed between training in robotic operating room (OR) team dynamics and perceived preparedness for independent robotic surgery

- Robotic team dynamic training serves as a proxy for whether a resident received meaningful robotic training

Results – Open Ended Responses

- 80% expressed satisfaction with the overall quality of MIGS training
  - When asked for feedback about how the curriculum could be improved, residents gave the following suggestions:

"More ability to practice these skills with a high fidelity simulator, especially for procedures that may not be available to residents"

"Earlier and more frequent exposure to a true MIGS curriculum"

"More integration early in residency"

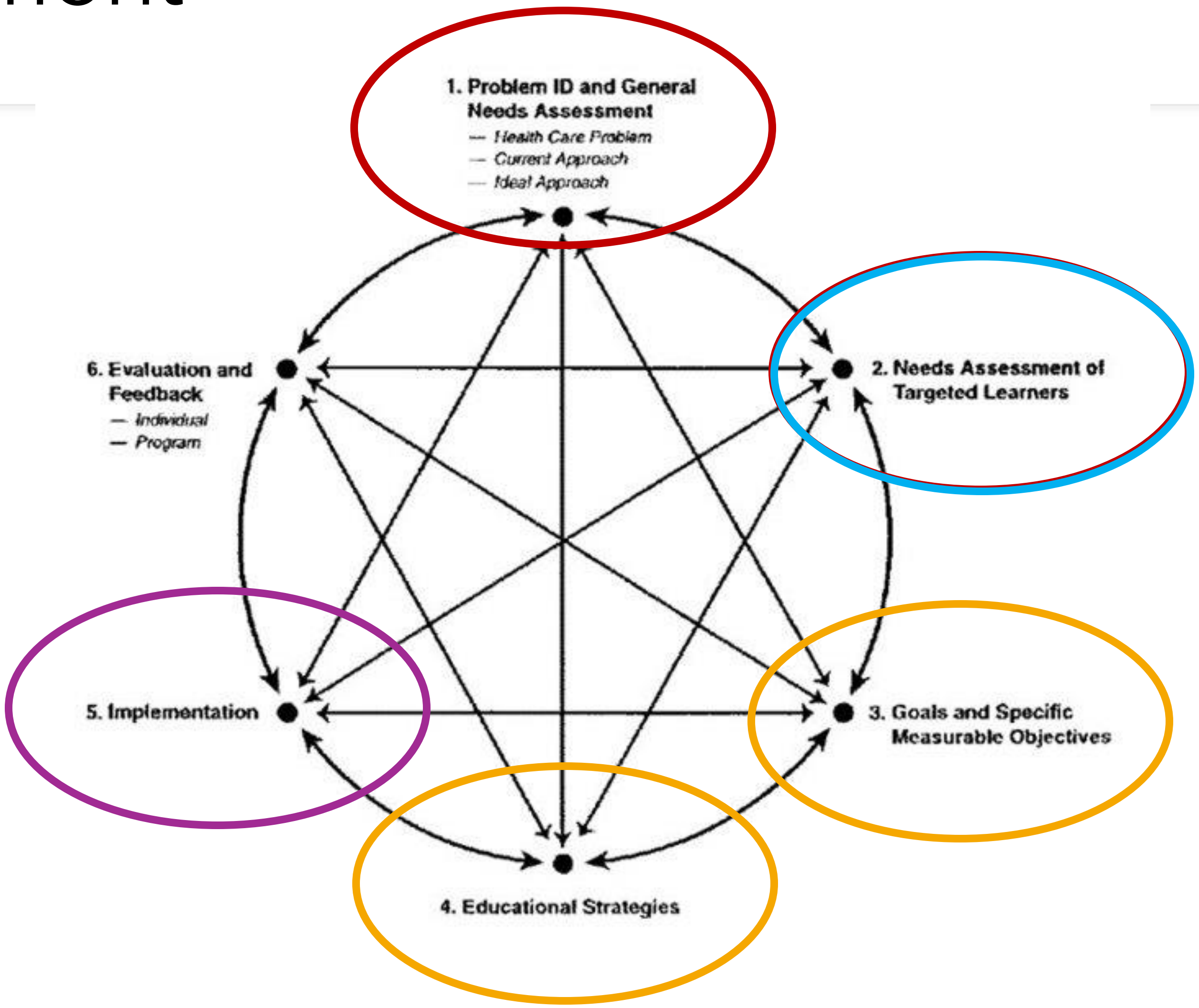
"More readily available certification with a streamlined process "

"Since there are MIGS fellows and multiple residents training per gyn surgery rotation, experience can be limited. Allow lots and lots of time on trainers built into gyn curriculum and work with reps to work through these things with residents"

Key Takeaways

- IUSM OB/GYN graduates did not feel adequately prepared for robotic surgery under the current curriculum
- Significant disparity between laparoscopic and robotic skill confidence
- Residents desire early robotics exposure and protected simulation time
- Residents desire robotic certification

Kern's 6 Step Approach to Curriculum Development



What have we done so far?

- Established champion for robotic skills training

- Early and frequent exposure to MIGS throughout training
  - Intern robotics bootcamp
  - At home laparoscopic trainer for each resident
  - Integration of yearly cadaver robotic and laparoscopic labs with progressive skill-building tailored to the trainee's level

Continuing Steps

PD/APDs

- Survey IUSM OB/GYN residency and fellowship PDs and APDs
- What would they like to see in their curriculum?

Curriculum

- Develop MIGS curriculum that addresses knowledge, technical and non-technical skills and meets both the ACGME and AAGL FMIGS Milestones

Incorporate

- Continue early integration of Robotic surgery
- Fully Incorporate new curriculum into 5-week MIGS rotation
- Establish protected time for simulation into the MIGS rotation

Thank you to Dr. Oshinowo and Team

- Alexandra Dadrat MD, MS
- Sara Spielman MD
- MaKayla Picklesimer MPH, CCRP
- Colette Gnade MD
- Leah Bode BS

And thank you to you all for listening!

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Survey Breakdown

- Training information:
- Current practice setting
- Current or past fellow?
  - Level
  - When did you complete?
- Sub-specialty
- Handedness
- How often did you practice laproscopic and robotic skills in a simulated setting in residency?
- When did you last practice these skills?
- How often do you practice these skills?

Survey cont.

- Do you currently or plan to use robotics in your career?
- If you became proficient, would you use robotics in your career?
- Have you had any robotics training since residency?
- Since graduating from residency have you operated at the robotic console during a live surgery?
- In the last 2 years how many times have you operated the robotic console during a live surgery?

Survey cont.

- Immediately following graduation from residency how able were you to conduct the following as the lead surgeon?
- At this time how able are you to conduct the following?

- Robotic hysterectomy
- Laparoscopic hysterectomy
- Vaginal hysterectomy
- Laparoscopic tubal ligation
- Laparoscopic ovarian cystectomy
- Laparoscopic excision endometriosis
- Simple operative hysteroscopy (ie - removal of IUD, polypectomy, small submucosal fibroid)
- Complex operative hysteroscopy (ie - Uterine scar excision, large submuscosal fibroid)

Survey cont.

- How much do you agree or disagree with the following?
  - I was satisfied with the quality of the curriculum
  - I had protected time to complete the curriculum
  - I felt that I would be prepared to perform independent robotic surgery, due to the curriculum
  - I felt that the curriculum was applicable to my career goals
  - I found the curriculum easy to navigate
  - I was adequately trained in the intricacies of teamwork in the robotic OR and closed loop communication

Survey cont.

- Demographics
    - Gender identity
    - Ethnicity
    - Race
    - Age