THE GEORGE WASHINGTON UNIVERSITY

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Further Expansion of Nested E-Modules to Address Anatomical Knowledge Retention in Medical Students entering the Obstetrics and Gynecology Clinical Rotation

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Goals

Our goal is to address deficits in a novel interactive e-module curriculum to improve student retention of anatomy related topics relevant to third-year OB/GYN clinical clerkship.

Background

• 143 consenting third-year medical students (IRB approved) took a 29 MCQ EXAM assessing pre and post-test retention on clinically relevant OB/GYN anatomy: uterus, vasculature, peritoneum, fallopian tube, muscles and ligaments, embryology, placenta, structure ID, neuroanatomy, histology (Jurjus et al., unpublished).

• INTEGRATED CURRICULUM

- interactive e-modules
- Hands-on gross laboratory session

• CURRICULUM EFFICACY

 evaluated efficacy of e-modules across anatomical topics using the data from table 1. This data illustrates that performance on embryology and histology questions is low.

Topics	Pretest % Correct	Posttest % Correct
Uterine	50.00%	88.33%
Vasculature	63.20%	77.33%
Peritoneum	86.00%	93.33%
Fallopian Tubes	56.00%	80.00%
Muscles and Ligaments	65.33%	75.56%
Embryology	38.00%	<mark>60.00%</mark>
Placenta	72.00%	73.33%
Structure ID	65.33%	77.22%
Neuroanatomy	68.00%	86.67%
Histology	4.00%	23.33%
Overall scores	54.50%	74.80%

Table 1: Percent correct for pre- and post-tests by anatomical category.

NEW TARGETED E-MODULES:

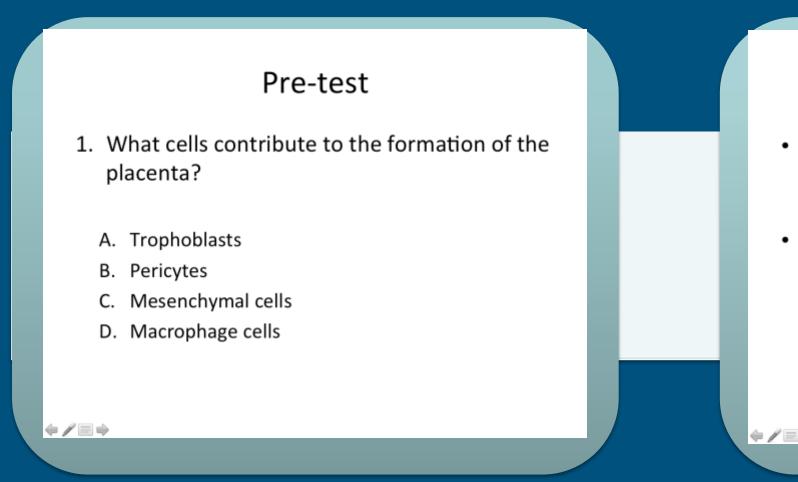
Expansion of e-module curriculum designed with an embryological and histological focus (Figs. 1-3).

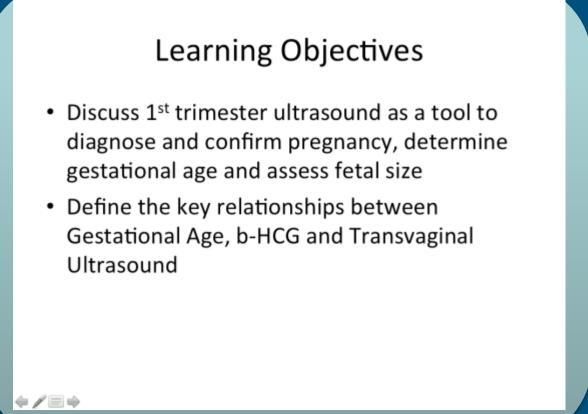
Methods

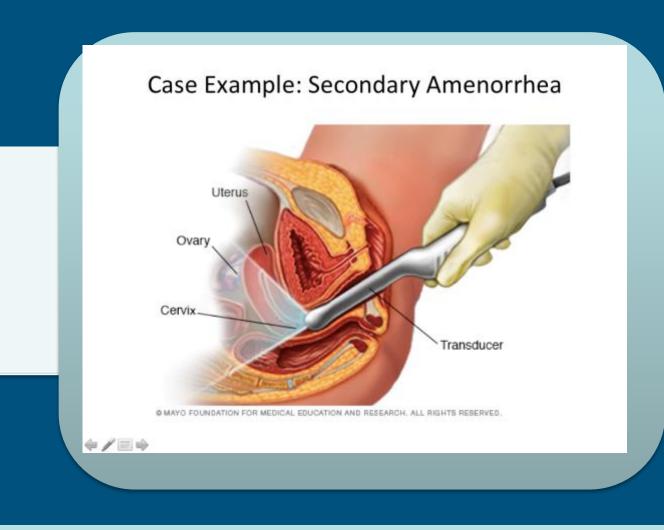
E-Module Design:

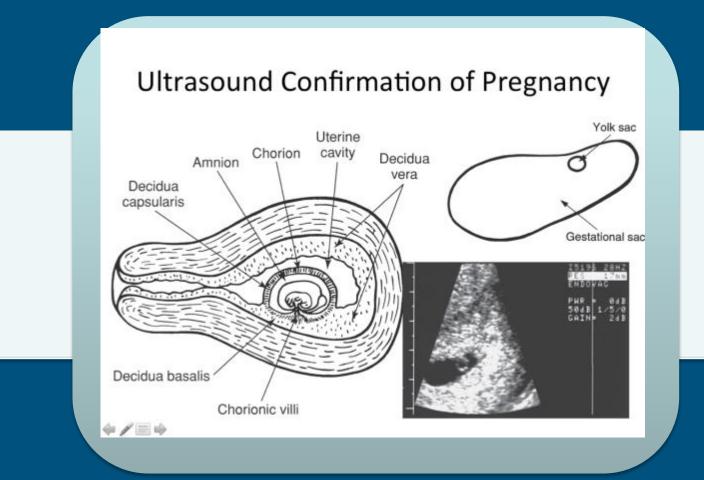
- Pre-test questions assess baseline knowledge
- Learning objectives focus adult learners
- Anatomy content uses pertinent images/diagrams
- Clinical content incorporates medical knowledge
- Post-test questions assess e-module retention

Fig 1: Ultrasound in Pregnancy using Embryological Knowledge









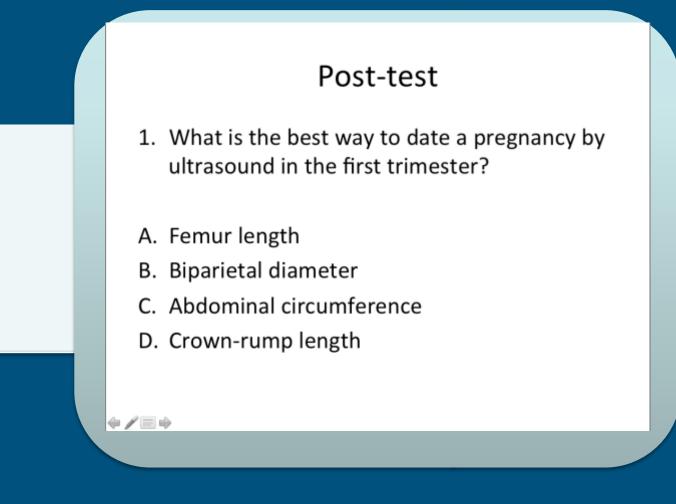
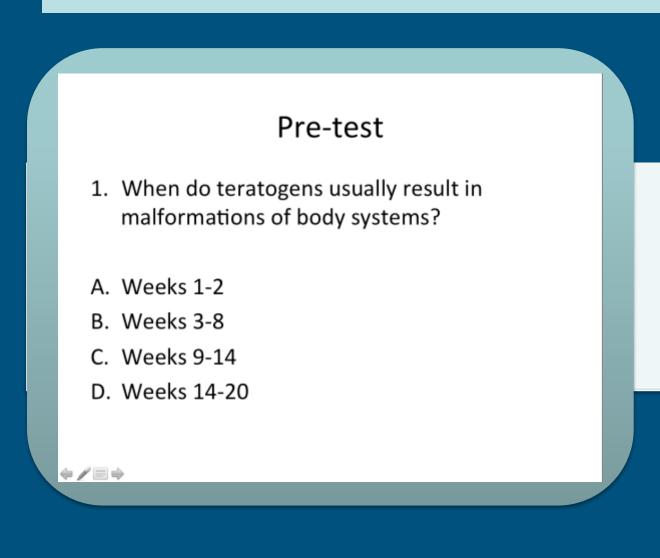
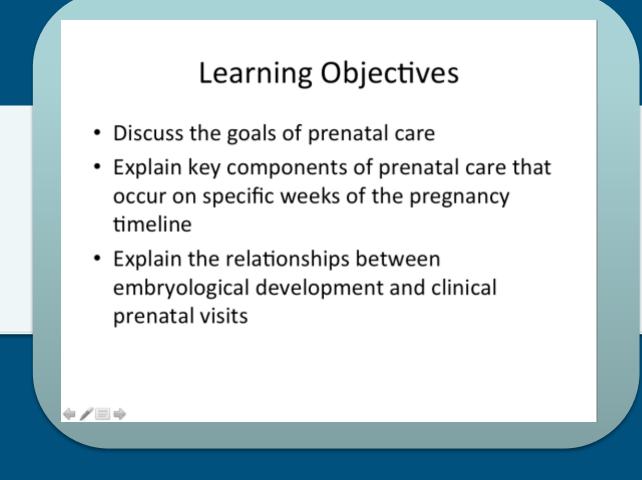
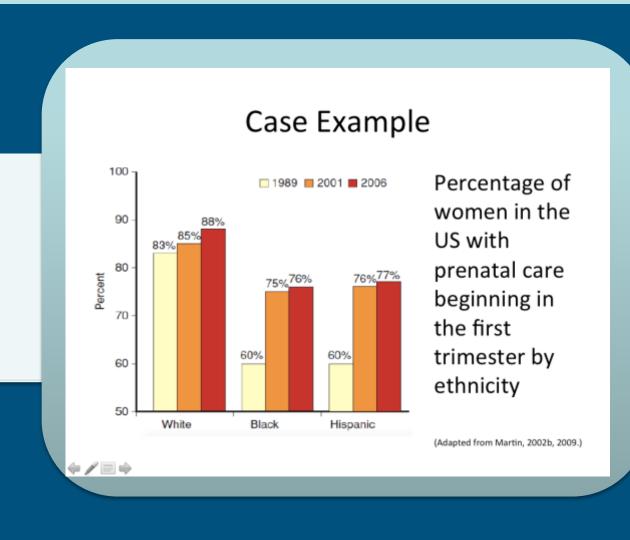
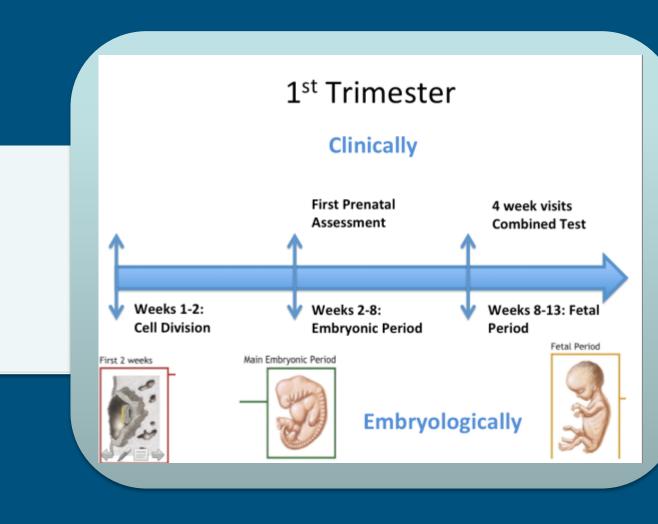


Fig 2: Pregnancy Timeline and the Embryo









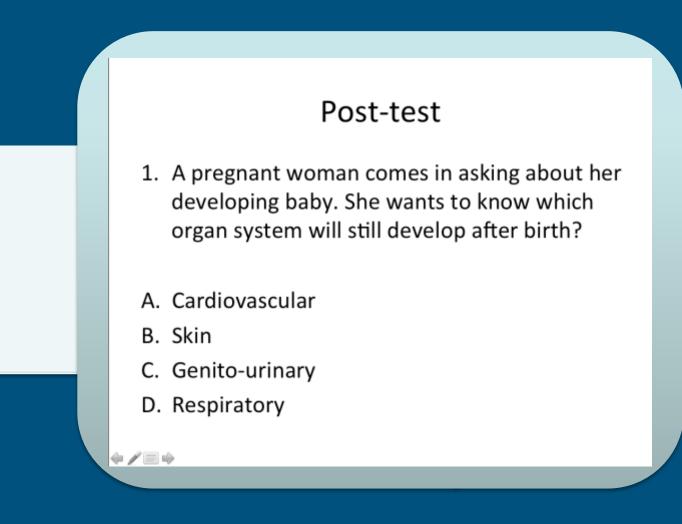
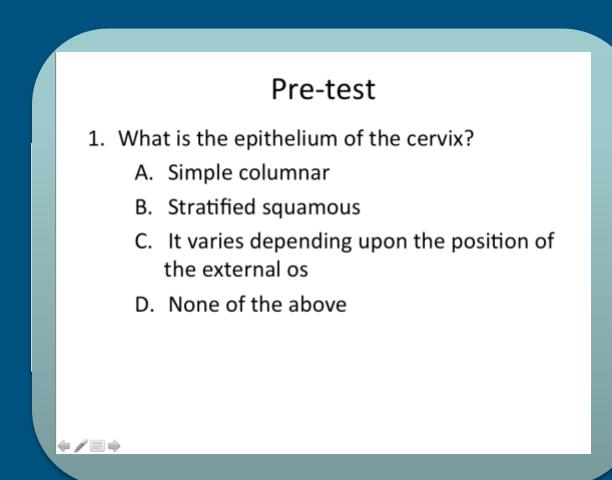
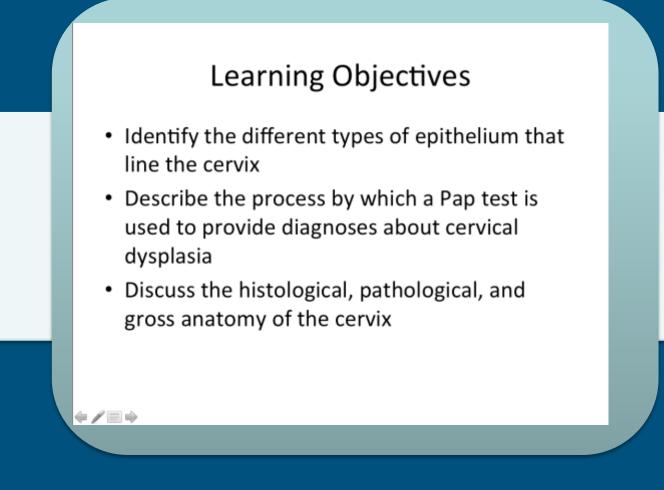
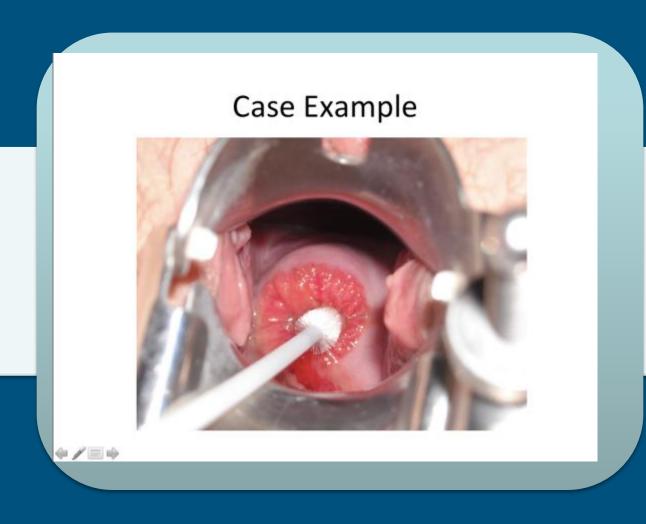
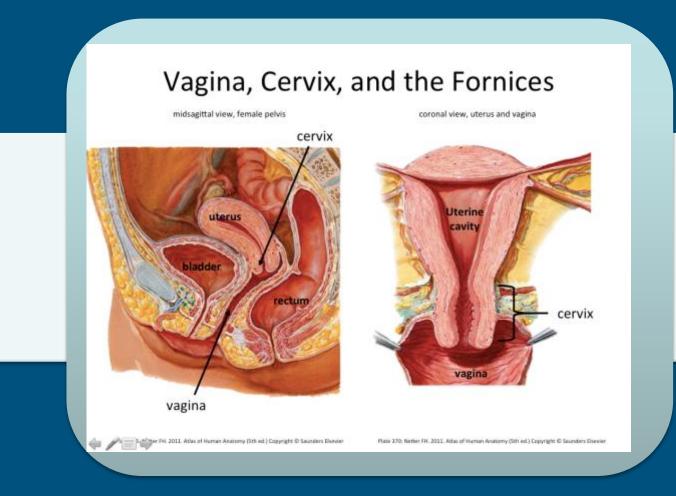


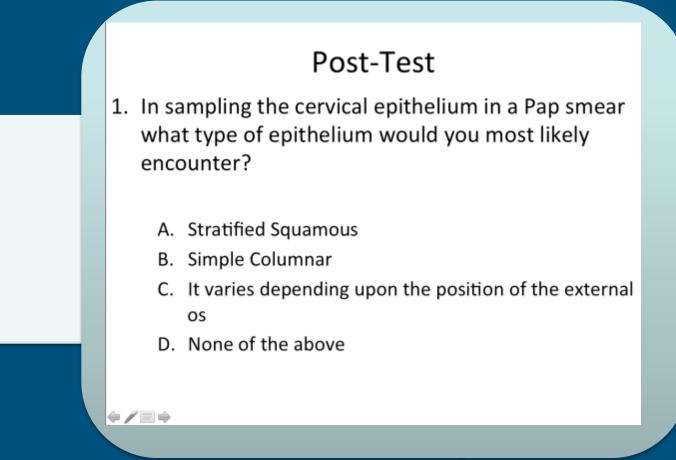
Fig 3: The Cervix in Health and Disease











Preliminary Results

New e-modules were created: 1) Ultrasound in Pregnancy using Embryological Knowledge 2) Pregnancy Timeline and the Embryo and 3) The Cervix in Health and Disease. Once finalized, these e-modules will be live on the Himmelfarb Library website.

Acknowledgements

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Conclusion

FUTURE DIRECTION: By further expanding the number of e-modules available to students, we hope to improve retention of clinically relevant anatomical knowledge in adult learners.

References

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