



# Symposium on Educational Excellence 2023

## Bridging the textbook to the clinic: teaching the menstrual cycle backwards

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### Keywords

Advancing diversity, equity, and inclusion in health sciences education, Classroom/didactic teaching, Educational research methods and models

### Abstract

Within OB/GYN residency training, there is a gap in knowledge and competence in the reproductive endocrinology and infertility (REI) subspecialty, noted both on resident and post-graduate surveys at our institution as well as nationally (Parker 2022; Roberts 2020). There is currently only one published REI curriculum, and the medical information covered is now outdated (Houmard 2012). In addition, as increasing but still limited insurance coverage for fertility care prevents access to REI subspecialists, it is imperative for generalist OB/GYNs to have proficiency in this field (Blakemore 2020). Knowledge of the menstrual cycle is foundational to the REI subspecialty, and is a natural place to begin curriculum development. Currently, the menstrual cycle at OHSU is taught in early medical courses, which take place more than 3 years before the start of OB/GYN residency. To review this information, and improve retention and applicability for a population of OB/GYN residents, we sought to teach the menstrual cycle backwards using interactive, small group sessions reviewing multiple brief clinical cases to teach and reinforce the physiology. We developed a curriculum with the following objectives: for OB/GYN residents to 1) accurately draw the major hormonal fluctuations of the menstrual cycle and label the phases accurately, 2) correctly identify hormonal fluctuations, ultrasound findings, and pathology reports consistent with the different phases of the menstrual cycle, and 3) apply improved knowledge of the menstrual cycle to solve a series of clinical questions in topics of fertility and contraception that directly translate to clinical practice. We performed a needs assessment of the residents and identified their current knowledge of the menstrual cycle and which associated topics were most relevant to their clinical practice. We also reviewed previously completed resident and post-graduate surveys at our institution supporting a need to improve REI curriculum. We developed a pilot 2-hour curriculum in which learners will rotate in small groups through three facilitator-led 30-minute sessions divided by section of the menstrual cycle (follicular, ovulation, luteal). Each session will begin with a brief Socratic-style didactic, transition into working through clinically relevant cases in small groups and, through these, review the physiology. Following these three sessions, learners will apply their gained knowledge to a final case that encompasses all phases of the menstrual cycle.

Thus, the curriculum will, in order, cover all three learning domains: cognitive, affective, and behavioral. Residents will be assessed by pre-survey and both immediate and 1-month post-surveys which will assess the residents knowledge using multiple-choice questions and assessing confidence, and self-perceived knowledge of REI compared to other OB/GYN subspecialties. On a 1-month follow up survey, questions will be repeated, and we will also assess whether learners have encountered clinical scenarios in which the knowledge gained was applicable. We will implement this pilot curriculum with a group of OB/GYN residents in March 2023. If successful, we hope to expand this REI curriculum to multiple institutions, and to potentially suggest that other specialties reinforcing physiology with resident learners can also adopt this backwards approach with success.

## Learning Objectives

1. To describe a gap in OB/GYN resident education, in the subspecialty of reproductive endocrinology and infertility (REI).
2. To recognize the importance of improving OB/GYN resident education in REI.
3. To review a novel approach to teaching the physiology of the menstrual cycle to learners, through a "backwards" approach beginning with clinically relevant cases.
4. To assess whether a similar approach could be relevant to learners in their own specialties.