

Interactive Resources in Medical Education (I-RIME) Sample from 2006

A WEB-BASED OBSTETRICAL MEDICINE CURRICULUM: TEACHING INTERNAL MEDICINE RESIDENTS HOW TO CARE FOR REPRODUCTIVE-AGE AND PREGNANT WOMEN C.L. Spagnoletti¹; A.M. Sanders¹; J.B. McGee¹; J.E. Bost¹; M.A. McNeil¹. ¹University of Pittsburgh, Pittsburgh, PA.

BACKGROUND:

Although the topics of preconception counseling, infertility, and medical conditions during pregnancy are internal medicine (IM) competency requirements, prior research has shown that both IM residents and faculty members feel inadequately trained in these areas. With consideration of competing educational requirements, limited faculty time/expertise, residency work-hour restrictions, and residents' limited opportunities to manage patients with such issues, our goal was to develop a web-based obstetrical medicine curriculum that improves knowledge, comfort, and preparedness to care for reproductive-age and pregnant women. All 2nd and 3rd year IM residents at the University of Pittsburgh were invited to participate.

CONTENT:

Three 30-minute web-based modules were developed in the following areas: cardiovascular disease in pregnant women (CV), endocrine disease in pregnant women (END), and preconception care and infertility (PCI). Content was based on the American College of Physicians IM competency requirements and topics covered by the IM board exam. The modules were made accessible over an established institutional website that contains modules on other topics.

DESIGN:

Each module consisted of a series of case-based quiz questions with immediate feedback provided, followed by a brief bulleted discussion that directed the user's attention to salient learning points for each topic. Links to published guidelines, tables/figures, and select references were included for additional learning. Pre/post-intervention 4-point Likert-type paper surveys assessed perceived preparedness to manage issues covered by the curriculum (1=unprepared, 4=well prepared). Web-based pre/post multiple choice tests to assess knowledge and a survey to assess resident satisfaction were administered in conjunction with each module.

EVALUATION:

A total of 96% of residents (67/70) completed both paper surveys and 59% completed 1 or more modules. While perceived preparedness to manage the issues covered by the curriculum improved for all survey respondents at the end of the study period, it was significantly higher for those who completed the CV, END, and PCI modules compared to non-completers (mean composite scores: cardiovascular issues: 2.94 vs. 2.35, $p < .001$, endocrine issues: 2.87 vs. 2.49, $p = .01$, preconception/infertility issues: 2.90 vs. 2.68, $p = .05$). The likelihood of reporting improved comfort to care for reproductive-age and pregnant women was positively associated with the number of modules completed ($p < .001$). Multiple choice test scores improved significantly with module completion (CV: pre: 66% vs. post: 91%, $p < .001$, END: 64% vs. 88%, $p < .001$, PCI: 62% vs. 80%, $p = .01$). The majority (68%) of module-takers stated they prefer learning these topics via a web-module format over a lecture-based format.

SUMMARY:

We developed a series of web-based modules to teach obstetrical medicine to IM residents who have limited clinical exposure to reproductive-age and pregnant women. This well-received curriculum was effective at improving their levels of knowledge, comfort, and preparedness, has required minimal faculty and resident time, and has not supplanted other educational requirements. Such a curriculum may be a valuable addition to many training programs, especially to those in which clinical exposure to this patient population is minimal, and those that already utilize web-based technology to instruct their trainees in other areas.