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Redefining our Territory: Reaching Pre-Matriculation Students With Case-Based, Online Instruction

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Abstract:
Online educational tools have made it possible for our library to claim some educational territory that was previously unavailable to us, the pre-matriculation period. During the summer of 2015 we were able to add a two-part, case-based, online tutorial to our incoming medical students’ pre-matriculation materials. We created the story of Sarah Pilger, a hypertensive, obese, pregnant teenager whose pregnancy is complicated by fetal toxoplasmosis. The case introduces the incoming students to all the resources they might want to use while enrolled at UNMC and also introduces students to the roles of the many healthcare professionals who are essential to the care of Sarah and her daughter Emily. Questions were posted throughout the online tutorial and instant feedback is provided. Student response to the 2016 tutorial was overwhelmingly positive. We revised the tutorial for use during the summer of 2017, added pre- and post-tests, and will be able to present results of these tests at meeting time. Our dream is to have tutorials for each of UNMC’s colleges’ entering classes based on Sarah’s case, and to use these tutorials to foster inter-professional conversation and education. We have already worked with faculty in UNMC’s College of Allied Health Professions to create versions of the tutorial for clinical nutrition and ultra-sonography students. The new tutorials are now used as the basis of inter-professional learning experience in these programs’ obstetric units.

Tutorial Storyline, Learning Issues, Resources

When the tutorial was created for 2016, it was broken into 8 episodes (15-20 minutes each) linked to the Sarah’s baby episodes, the pre- and post-tutorial survey, and the post were provided through Blackboard. The quiz questions were identical to the interactive questions in the tutorial episodes. Successful completion was worth 5 points in a full course.

Episode 1: The tutorial asks that the student pretend that she is in the third month of her family practice residency and is seeing a new patient, Sarah Pilger, in her office today. Sarah, an obese 16 year old, is accompanied by her mother Pat Pilger. The and Sarah first suspect that Sarah was pregnant when Sarah’s dentist noticed that the bigness and, more frequently, tender belly on Sarah’s upper gum was a sign of any morning sickness in pregnancy. Sarah asks whether her baby is likely to be blind. Emily’s psychomotor development is within normal limits. Sarah asks whether her baby is likely to be blind. Emily’s psychomotor development is within normal limits. Sarah is doing well with help from her Mom and meat and Grandparents. Emily is on a diet to lose weight after Sarah’s ultrasound findings. The mild fetal ventriculomegaly, intraparenchymal cerebral calcifications, ascites, and asymmetric growth retardation are consistent with an infection of the fetus and placenta and membranes. She suggests a fetal MRI to verify the ultrasound findings, immediate diagnostic tests on the mothers’ blood and perhaps an amniotic fluid test, as, depending on the diagnosis, treatment may be required.

Episode 2: Sarah’s lab work shows high anti-toxoplasmosis IgM and high levels of low avidity, anti-toxoplasmosis IgG. She is referred to infectious disease for diagnosis and treatment. EMR search is the key term to search that resource. The post-tutorial survey results show that students felt less improvements to the tutorial. The tutorial did present Pulmed search tips (the use of Boolean operators, parentheses, quotes, asterisks, filters, and the advanced search techniques, and additional questions concerning PubMed search techniques will be added next year.

Conclusions:
The Sarah’s baby tutorials were aimed primarily at increasing students’ ability to select an appropriate online resource, find, and search that resource. Post-tutorial survey results show that students felt less improvements to the tutorial. The tutorial did present Pulmed search tips (the use of Boolean operators, parentheses, quotes, asterisks, filters, and the advanced search techniques, and additional questions concerning PubMed search techniques will be added next year.

References: