

MedEdPortal Instructors' Guide

Resource title:

Cervical Cancer Prevention and Screening

Description:

The complexity of the Human Papilloma Virus (HPV)-host interaction along with dense cervical cancer screening guidelines hamper students' easy learning of the subject. This online learning-module intends to provide a comprehensive overview of HPV infection to help students better understand the rationale behind the screening protocol. The content of this module summarizes key concepts such as viral structure and replication, human immune-defense, immunization strategy, pathogenesis of cervical pre-cancer and cancer, and finally, prevention and management strategy of HPV infection in gynecologic patients. The target audience will be primarily third-year medical students rotating through their OB-GYN clerkship. In-house training of residents or attending physicians could also benefit from the educational material contained in this module.

The module takes advantage of the audio-visual effects to maximize student learning. It is organized in sessions of sub-topics with core text, embedded images, illustrations and recorded voice-over script. In addition, there is a video at the end of the module which simulates a patient encounter in a doctor's office to discuss cervical cancer screening and management. Pre-test and post-test questions help the viewer keep track of their progress upon completion.

Learning objectives

Upon completion of this activity participants should be able to:

- Describe the immunological basis of Human Papillomavirus infection and the implication of the persistent infection on the pathogenesis of cervical cancer and pre-cancer.
- Identify the basic concepts of viral immunization and the impact of the newly developed HPV vaccine as an effective strategy for the prevention of cervical cancer.
- Explain the clinical rationale behind the cervical cytology screening.
- Understand and be able to discuss with the patient the initial management of the abnormal pap smear.

The purpose/goal of the resource (including educational objectives):

The purpose of creating an online module is for the 3rd year OBGYN clerkship to incorporate more of the basic science aspects into the clinical curricula. Not only are clinical assessment and management skills for HPV infection demonstrated in this module, but also the viral structure and replication, human immune-defense, immunization strategy, pathogenesis of cervical pre-cancerous and cancerous HPV infection. The educational objectives of the module are to describe the immunological basis of Human Papillomavirus infection and the implication of the persistent infection on the pathogenesis of cervical cancer and pre-cancer, identify the basic concepts of viral immunization and the impact of the newly developed HPV vaccine as an effective

strategy for the prevention of cervical cancer, explain the clinical rationale behind the cervical cytology screening and understand and be able to discuss with the patient the initial management of the abnormal pap smear.

The conceptual background:

The module was created for third year medical students to have a quick easy reference that incorporates basic science with the rationale for clinical assessment, management and the importance of prevention for HPV infection. It was created through the online Learning Activity Management System spearheaded by OBGYN Clerkship Director Dr. Tsai working with the Department of Educational Informatics of NYU School of Medicine and also with medical students and an OBGYN 2nd year resident.

Practical implementation advice:

To be given to 3rd year students rotating through the OBGYN clerkship. All they need is access to a computer, and since it is password protected, a username and password.

How it has been successfully deployed:

It is available to all NYU School of Medicine medical students on the NYU Medical Center intranet system available only to NYU Medical Center hospital employees and students with a Kerberos ID and password.

The limitations of the resource and ideas for improving/expanding it:

Based on the 19 evaluations collected to date, the following are limitations of the module and possible ideas for change going forward: the aspects on viruses are a little basic for third year medical students. However, the purpose of a brief review of basic concepts on viral structure on host immune response aims to integrate basic science into student clinical practice as emphasized by LCME. In addition, more time might be spent going through the management of abnormal pap smears and indications of pap smears in general instead. We will try to reorganize the chronology of the clinical management session to maximize learning retention.

For some students, it may be too long so we would consider shortening it without compromising relevant information.

References

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