



Body System: Hematologic-Immune			
Session Topic: Zika Virus Update			
Educational Format		Faculty Expertise Required	
REQUIRED	Interactive Lecture	Expertise in the field of study. Experience teaching in the field of study is desired. Preferred experience with audience response systems (ARS). Utilizing polling questions and engaging the learners in Q&A during the final 15 minutes of the session are required.	
OPTIONAL	Problem-Based Learning (PBL)	Expertise teaching highly interactive, small group learning environments. Case-based, with experience developing and teaching case scenarios for simulation labs preferred. Other workshop-oriented designs may be accommodated. A typical PBL room is set for 50-100 participants, with 7-8 each per round table. <u>Please describe your interest and plan for teaching a PBL on your proposal form.</u>	
Professional Practice Gap		Learning Objective(s) that will close the gap and meet the need	Outcome Being Measured
<ul style="list-style-type: none"> Physicians in the U.S. are unfamiliar with the Zika virus including clinical manifestations. Physicians have a knowledge and skill gap in the management of emerging infections and infectious diseases. Physicians require training on current recommendations for infection prevention and control of emerging infectious disease, be knowledgeable of accessible resources to help them remain current as new information becomes available, and develop practice-based strategies to put into place for responding to outbreaks. 		<ol style="list-style-type: none"> Counsel patients planning on traveling to areas with known cases of Zika virus to take necessary precautions to prevent infection. Recognize clinical manifestations of Zika viral infection, distinguishing it from other infections (e.g. dengue fever, West Nile), and diagnose accordingly. Establish detailed, practice-based plans for responding to complex medical emergencies that include protocols to report notifiable diseases in the community of practice. 	Learners will submit written commitment to change statements on the session evaluation, indicating how they plan to implement presented practice recommendations.
ACGME Core Competencies Addressed (select all that apply)			
X	Medical Knowledge	X	Patient Care
X	Interpersonal and Communication Skills		Practice-Based Learning and Improvement



Professionalism	Systems-Based Practice
Faculty Instructional Goals	
<p>Faculty play a vital role in assisting the AAFP to achieve its mission by providing high-quality, innovative education for physicians, residents and medical students that will encompass the art, science, evidence and socio-economics of family medicine and to support the pursuit of lifelong learning. By achieving the instructional goals provided, faculty will facilitate the application of new knowledge and skills gained by learners to practice, so that they may optimize care provided to their patients.</p> <ul style="list-style-type: none"> • Provide up to 3 evidence-based recommended practice changes that can be immediately implemented, at the conclusion of the session; including SORT taxonomy & reference citations • Facilitate learner engagement during the session • Address related practice barriers to foster optimal patient management • Provide recommended journal resources and tools, during the session, from the American Family Physician (AFP), Family Practice Management (FPM), and Familydoctor.org patient resources; those listed in the <u>References</u> section below are a good place to start <ul style="list-style-type: none"> ○ Visit http://www.aafp.org/journals for additional resources ○ Visit http://familydoctor.org for patient education and resources • Provide recommendation for counseling patients planning on traveling to areas with known cases of Zika virus to take necessary precautions to prevent infection – especially women who are pregnant &/or of child-bearing age. • Provide recommendations to help physicians recognize clinical manifestations of Zika viral infection, distinguishing it from other infections (e.g. dengue fever, West Nile), and diagnose accordingly. • Provide strategies for establishing detailed, practice-based plans for responding to complex medical emergencies that include protocols to report notifiable diseases in the community of practice. • Provide an update about Zika virus vaccine status. • Provide recommendations for valid and reliable sources of information regarding Zika (i.e. is there anything else out there besides CDC? Or is that the best source?) 	

Needs Assessment

As of February 24, 2016 there have been 107 laboratory-confirmed Zika virus disease travel-associated cases in the United States.¹ In the wake of a recent surge of severe birth defects among infants born to women in Brazil who became infected with Zika virus during pregnancy, CDC officials have issued a travel alert(www.cdc.gov) for that nation and 13 other countries and territories where transmission of the virus is ongoing.² Additionally, the CDC recommends that men who reside in or have traveled to an area of ongoing Zika virus transmission who have a pregnant partner should abstain from sexual activity or consistently and correctly use condoms during sex with their pregnant partner for the duration of the pregnancy. Pregnant women should discuss their male partner’s recent travel history and any illness consistent with Zika virus disease with their health care provider; providers can consult CDC’s guidelines for evaluation and testing of pregnant women.³



Zika virus disease became a nationally notifiable condition in 2016.⁴ Cases are reported to CDC by state, territorial, and local health departments using standard case definitions. This webpage contains cumulative provisional data reported to ArboNET for January 1, 2015- June 21, 2017.

US States

- 5,296 symptomatic Zika virus disease cases reported (excludes congenital disease cases)
- 5,024 cases in travelers returning from affected areas
- 224 cases acquired through presumed local mosquito-borne transmission
- 48 cases acquired through other routes, including sexual transmission (N=46), laboratory transmission (N=1), and person-to-person through an unknown route (N=1)
- As of June 13, 2017, 1,963 pregnant women with any laboratory evidence of possible Zika Virus infection, 2016-2017

The American Academy of Family Physicians (AAFP) CME Needs Assessment Survey indicates that family physicians have a knowledge and skill gap in the management of emerging infections and infectious diseases.⁵ This is particularly true in the case of the Zika virus, as it is a newly emerging problem in the US. More specifically, CME outcomes data from 2016 AAFP FMX: *Zika Virus* sessions, indicate that physicians have knowledge and practice gaps with regards to counseling patients who are pregnant or may become pregnant about Zika Virus risks and exposure prevention; educating the health care team about Zika Virus symptoms and travel questionnaires; identifying potential cases; and remaining up to date on new trends and updates.⁶

While family physicians in some areas may not encounter infectious disease outbreaks in a given year, they must still understand the public health implications associated with emergency preparedness and response. Overall, 3% to 19% of travelers to the developing world will have a fever on their return to the United States, or will develop fever within weeks of their return; and often a challenge for physicians to diagnose.⁷ Family physicians play a critical role in the detection, prevention, and management of an infectious disease epidemic. Detailed plans should be in place ensuring communication among staff, between patients and their families, and with other healthcare providers (including public health officials) can help to reduce medical errors, treatment complications and healthcare-associated infections, particularly when hospitalization for infectious disease is required.⁸

This suggests that family physicians should receive training on current recommendations for infection prevention and control of emerging infectious disease, be knowledgeable of accessible resources to help them remain current as new information becomes available, and develop practice-based strategies to put into place for responding to outbreaks.

Family physicians must become familiar with the epidemiology, case definitions, clinical manifestations, collection of specimens, diagnosis, reporting, shipment of specimens to the CDC, surveillance, infection control, taking airborne precautions, and in general, understand their role and responsibilities in infectious disease management.



Physicians may improve their care of patients by engaging in continuing medical education that provides practical integration of current evidence-based guidelines and recommendations into their standards of care, including, but not limited to the following:^{9,10}

- For pregnant women (symptomatic* and asymptomatic) who are evaluated two to 12 weeks after possible exposure to Zika virus,[†] serum IgM testing is recommended. If results are positive or equivocal, serum and urine RNA NAT should be performed. If RNA NAT results are negative, PRNT should be performed.
- Asymptomatic pregnant women who live in areas with active Zika virus transmission should have Zika virus IgM testing as part of routine obstetric care during the first and second trimesters, with immediate RNA NAT for those with positive IgM results.
- For symptomatic* persons (including pregnant women) with possible exposure to Zika virus[†] who present less than two weeks after symptom onset, serum and urine RNA NAT is recommended. If results are negative, serum IgM testing should be performed, and a positive or equivocal IgM result should be confirmed by PRNT.
- For asymptomatic pregnant women with possible exposure to Zika virus[†] who do not live in areas with active Zika virus transmission, serum and urine RNA NAT is recommended if the samples are collected less than two weeks after the last possible exposure. If results are negative, Zika virus IgM testing should be performed on serum collected two to 12 weeks after possible exposure, and a positive or equivocal IgM result should be confirmed by PRNT.
- For symptomatic* persons with possible exposure to Zika virus[†] who present two weeks or more after symptom onset, serum IgM testing should be performed. In nonpregnant women, a positive or equivocal IgM result should be followed by PRNT to confirm the diagnosis.
- Pregnant women should not travel to areas with active Zika virus transmission.
- Men and women who do not live in areas with active Zika virus transmission and who are planning to conceive in the near future should consider avoiding nonessential travel to areas with active Zika virus transmission.
- All persons who live in or travel to an area with active Zika virus transmission should be counseled on strategies to prevent transmission of Zika virus and other mosquito-borne diseases. This includes using Environmental Protection Agency–registered insect repellents, wearing long-sleeved shirts and long pants, using permethrin-treated clothing (except in Puerto Rico), and using air conditioning or window and door screens when indoors.
- Pregnant women with partners who live in or have traveled to an area with active Zika virus transmission should use condoms every time they have sex or should abstain from sex with that partner for the remainder of the pregnancy.
- Women of reproductive age who have had or anticipate Zika virus exposure and do not want to become pregnant should be counseled about contraceptive options.
- Men who do not live in an area with active Zika virus transmission but have possible Zika virus exposure[†] should wait to attempt conception with their partner for at least six months after symptom onset or the last possible exposure.
- Women who do not live in areas with active Zika virus transmission but have possible Zika virus exposure[†] should wait to attempt conception until at least eight weeks after symptom onset or last possible exposure.



- Women who live in an area with active Zika virus transmission and who have symptoms should be tested for Zika virus infection; those who test positive should wait at least eight weeks from symptom onset to attempt conception.
- Men who live in an area with active Zika virus transmission and who have symptoms should be tested for Zika virus infection; those who test positive should wait at least six months from symptom onset to attempt conception.
- Asymptomatic women and men who live in areas with active Zika virus transmission and who desire pregnancy should talk with their physician.
- When used as directed on the product label, insect repellents containing active ingredients such as DEET, picaridin, and IR3535 are considered to be safe for pregnant and nursing women.

These recommendations are provided only as assistance for physicians making clinical decisions regarding the care of their patients. As such, they cannot substitute for the individual judgment brought to each clinical situation by the patient's family physician. As with all clinical reference resources, they reflect the best understanding of the science of medicine at the time of publication, but they should be used with the clear understanding that continued research may result in new knowledge and recommendations. These recommendations are only one element in the complex process of improving the health of America. To be effective, the recommendations must be implemented. As such, physicians require continuing medical education to assist them with making decisions about specific clinical considerations.

Resources: Evidence-Based Practice Recommendations/Guidelines/Performance Measures

- Zika Virus: Common Questions and Answers¹⁰
- Update: Interim Guidance for Preconception Counseling and Prevention of Sexual Transmission of Zika Virus for Persons with Possible Zika Virus Exposure — United States, September 2016¹¹
- CDC Interim Guidelines (various Zika-specific)¹²
- Preparing Your Office for an Infectious Disease Epidemic⁸
- AAFP Clinical Recommendations: Infectious Disease¹³
- CDC Online Journal: Emerging Infectious Diseases¹⁴
- CDC Division of Preparedness and Emerging Infections (DPEI)¹⁵
- AHRQ Guidelines: Common infections in the long-term care setting¹⁶
- CDC National Center for Emerging and Zoonotic Infectious Diseases¹⁷
- CDC National Notifiable Diseases Surveillance System (NNDSS)¹⁸
- CDC Fact Sheets for Patients/Pregnant Women¹⁹
- Zika Virus (patient education)²⁰

References



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1. Centers for Disease Control and Prevention. Zika virus disease in the United States, 2015–2016. 2016;
2. CDC Warns of Viral Illness Tied to Severe Birth Defects: Agency Advises Pregnant Women to Postpone Travel to Central, South America. *AAFP News*. 2016.
3. Hills SL. Transmission of Zika Virus Through Sexual Contact with Travelers to Areas of Ongoing Transmission—Continental United States, 2016. *MMWR Morbidity and mortality weekly report*. 2016;65.
4. Centers for Disease Control and Prevention. Zika Cases in the United States. 2017;
5. AAFP. 2012 CME Needs Assessment: Clinical Topics. American Academy of Family Physicians; 2012.
6. American Academy of Family Physicians (AAFP). AAFP FMX CME Outcomes Report. Leawood KS: AAFP; 2016.
7. Feder HM, Jr., Mansilla-Rivera K. Fever in returning travelers: a case-based approach. *American family physician*. 2013;88(8):524-530.
8. Mackett CW, 3rd. Preparing your office for an infectious disease epidemic. *Family practice management*. 2009;16(4):11-14.
9. Meaney-Delman D, Rasmussen SA, Staples JE, et al. Zika Virus and Pregnancy: What Obstetric Health Care Providers Need to Know. *Obstet Gynecol*. 2016;127(4):642-648.
10. Igbinoso, II, Rabe IB, Oduyebo T, Rasmussen SA. Zika Virus: Common Questions and Answers. *American family physician*. 2017;95(8):507-513.
11. Petersen EE, Meaney-Delman D, Neblett-Fanfair R, et al. Update: Interim Guidance for Preconception Counseling and Prevention of Sexual Transmission of Zika Virus for Persons with Possible Zika Virus Exposure - United States, September 2016. *MMWR Morbidity and mortality weekly report*. 2016;65(39):1077-1081.
12. Centers for Disease Control and Prevention. For Health Care Providers. 2016;
13. American Academy of Family Physicians (AAFP). Infectious Disease. *Clinical Recommendations* 2013;
14. Centers for Disease Control and Prevention. *Emerging Infectious Diseases*. 2013.
15. Centers for Disease Control and Prevention. Division of Preparedness and Emerging Infections (DPEI). 2011;
16. American Medical Directors Association (AMDA). Common infections in the long-term care setting. 2011;
17. Centers for Disease Control and Prevention. National Center for Emerging and Zoonotic Infectious Diseases. 2013;
18. Centers for Disease Control and Prevention. National Notifiable Diseases Surveillance System (NNDSS). 2013;
19. Centers for Disease Control and Prevention. Zika MAC-ELISA Emergency Use Authorization. 2016;
20. FamilyDoctor.org. Zika Virus. 2016;