1. ZIKA: SUSAN HILLS, MBBS, MTH
   **General**

   **Transmission and presentation of Zika virus infection**

   Moreira J, Peixoto TM, Siqueira AM, Lamas CC. Sexually acquired Zika virus: a systematic review. *Clin Microbiol Infect* 2017; 23:296-305


   **Congenital infection**

   **Management and guidelines**


   **Vaccine development**


2. MALARIA: JOHANNA DAILY, MD, MS
   **Epidemiology**
   Travelers Malaria
   Malaria Surveillance — United States, 2014. Mace KE, Arguin PM. *MMWR Surveill Summ* 2017; vol 66; No.12. *Increasing prevalence of malaria in US. Epidemiology o the 1,724 cases reported in 2014 presented.. Table of CDC websites and phone numbers for health care professionals to obtain advice on malaria prophylaxis, diagnosis and treatment recommendations.*

   **On Taking a Different Route: An Unlikely Case of Malaria by Nosocomial Transmission**
The prevalence of Plasmodium falciparum in sub-Saharan Africa since 1900. Snow RW, Sartorius B, Kjalo D, Maina J, Amratia P, Mundia CW, Bejon P, Noor AM. Nature. 2017 Oct 11. doi: 10.1038/nature24059. Quantitative analysis of malaria transmission cycles in Africa over 115 years finds that surges or declines in transmission cannot easily be explained by single factors such as weather, interventions or economics. Some regions have not had reductions in malaria transmission, despite implementation of malaria control programs.

Zoonotic malaria

Worldwide Artemisinin Resistance

Clinical Management
Malaria Prevention Strategies: Adherence among Boston Area Travelers Visiting Malaria-Endemic Countries Stoney RJ, Chen LH, Jentes ES, Wilson ME, Han PV, Benoit CM, MacLeod WB, Hamer DH, Barnett ED; Boston Area Travel Medicine Network. Am J Trop Med Hyg. 2016 Jan;94(1):136-42 Prospective study of adults traveling to malaria-endemic countries who were prescribed malaria chemoprophylaxis during a pre-travel consultation at three travel clinics in the Boston area and who completed three or more surveys. Good adherence was achieved. Main reasons for declining to take prescribed chemoprophylaxis were peer advice, low perceived risk, and not seeing mosquitoes.

High Rate of Treatment Failures in Nonimmune Travelers Treated With Artemether-Lumefantrine for Uncomplicated Plasmodium falciparum Malaria in Sweden: Retrospective Comparative Analysis of Effectiveness and Case Series. Sondén K, Wyss K, Jovel I, Vieira da Silva A, Pohanka A, Asghar M, Homann MV, Gustafsson LL, Hellgren U, Färnert A. Clin Infect Dis. 2017 Jan 15;64(2):199-206. Reports a high frequency of late AL treatment failures in adult travelers treated for uncomplicated P. falciparum malaria in Sweden. Among 95 patients treated with AL for uncomplicated episodes, 5 (5.2%) had late treatment failures classified as recrudescent by molecular studies. In contrast, no failure was found with the previously used first-line treatment MQ.


Malaria Control and Prevention
60% (95% CI 54%–64%, p < 0.001) in the incidence of malaria cases, a reduction in the incidence rate of severe disease of 45% (95% CI 5%–68%, p = 0.031) and reduction in incidence in children and adults too old to receive SMC was reduced by 26% (95% CI 18%–33%, p < 0.001). Thus in some areas, expanding the age range for SMC could have a substantial impact on the malaria burden and could contribute to reducing malaria transmission.

Seven-Year Efficacy of RTS,S/AS01 Malaria Vaccine among Young African Children Olotu A, Fegan G, Wambua J, Nyangweso G, Leach A, Lievens M, Kaslow DC, Njuguna P, Marsh K, Bejon P. N Engl J Med. 2016 Jun 30;374(26):2519-29. 7 years of follow-up in children who had been randomly assigned, at 5 to 17 months of age, to receive three doses of either the RTS,S/AS01 vaccine or a rabies (control) vaccine. The vaccine efficacy, to prevent mild clinical malaria was 4.4% (95% confidence interval [CI], -17.0 to 21.9; P=0.66) in the intention-to-treat analysis. Vaccine efficacy waned over time with negative efficacy during the fifth year among children with high exposure to malaria parasites (intention-to-treat analysis: -43.5%; 95% CI, -100.3 to -2.8 [P=0.03]. Malaria cases are averted by the vaccine, but protection wains over time and protection from asexual stages is not developed. Larger studies to test vaccine effectiveness under real world settings are underway.

3. YELLOW FEVER: J. ERIN STAPLES, MD, PHD
Reviews
- Barrett ADT. Yellow fever live attenuated vaccine: A very successful live attenuated vaccine but still we have problems controlling the disease. Vaccine. 2017; 35(44): 5951-5955.

Epidemiology

Clinical features
Selected articles that describe in detail the clinical features of travel associated yellow fever disease cases.

Diagnosis
Selected articles that examine alternative body fluids or diagnostics assays that might have utility in diagnosis of yellow fever.


Vaccine

Availability

Selected articles that review or provide specific information on yellow fever vaccine availability


Use

Selected articles that relate to yellow fever vaccine policy, KAP (knowledge attitude, and practice), co-administration, and immunogenicity


**Vaccine Adverse Events**

*Selected articles that note relatively novel adverse events associated with yellow fever vaccine*

• Wauters RH, Hernandez CL, Petersen MM. An atypical local vesicular reaction to the yellow fever vaccine. Vaccines (Basel). 2017; 5(3).

**Prevention**

*Articles that review WHO/PAHO plan to decrease the burden of yellow fever disease globally and note utility of certain personal protective measures*


4. **BOBBI PRITT, MD, MSC, DTMH**

Nucleic Acid Amplification Tests
• Cartridge assays - Singleplex
  – Related:
    • Khonga M, Nicol MP. Xpert MTB/RIF Ultra: a gamechanger for tuberculous meningitis? *Lancet Infect Dis* 2017; ePub 9/14/17

• Cartridge assays - Multiplex

Next Generation Sequencing (NGS)

• Targeted Approach

• Unbiased Approach
  – Related:


**Proteomics and Metabolomics**