

Changing Trends in Infectious Agents

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- I. Bacterial agents
 - a. *Streptococcus pneumoniae*
 - i. Serotype replacement
 - ii. 13-valent conjugate vaccine
 - b. *Neisseria meningitidis*
 - i. Current low prevalence in US
 - ii. New recommendation for booster dose of conjugate vaccine for adolescents
 - iii. Progress on a vaccine for group B
 - c. *Haemophilus influenzae* type b
 - i. Rare breakthrough cases in US related to vaccine refusal
 - d. *Listeria monocytogenes*
 - i. Listeriosis as a food-borne disease
 - e. *Enterobacteriaceae* and *Acinetobacter*
 - i. Increase in broad antibiotic resistance
 - 1. KPCs
 - 2. NDM-1
 - f. *Mycobacterium tuberculosis*
 - i. Continued importance in developing world
 - ii. The problem of multidrug resistance and its relationship to HIV co-infection
 - iii. Prospects for rapid diagnosis
 - g. *Rickettsiae*
 - i. Ehrlichia as an emerging disease
 - ii. Central nervous system manifestations
 - h. Spirochetes and *Borrelia*
 - i. Syphilis – current US epidemic
 - ii. Lyme disease – on-going issues with diagnosis
 - iii. Southern tick associated rash illness (STARI) – a real entity?
- II. Viruses
 - a. HSV
 - i. Importance of HSV-2 as a CNS pathogen
 - ii. Current approach to diagnosis and treatment
 - b. VZV – current low prevalence in US related to universal immunization
 - c. EBV – growing importance of post-transplant lymphoproliferative disorder (PTLD)
 - d. CMV
 - i. Current treatment approaches

- ii. Drug resistance
 - e. JC virus – Possible therapeutic approaches
 - f. Enteroviruses and Parvoviruses
 - i. What are parvoviruses?
 - ii. Current approaches to diagnosis
 - g. HIV
 - i. Status report on the epidemic – areas of active transmission
 - ii. Drug treatment
 - h. West Nile – well established in US
 - i. Influenza
 - i. Recap of 2009 epidemic
 - ii. Review of the 2010-2011 season
 - iii. Impact of universal annual immunization in US
 - iv. Approaches to treatment
- III. Fungi
 - a. *Cryptococcus* – emergence of *Cryptococcus gattii*
 - b. New therapeutic agents for fungal infections
 - i. Lipid amphotericin B
 - ii. Voriconazole, posaconazole and other azoles
 - iii. Echinocandins
- IV. Parasites
 - a. Current status of malaria control
 - b. New therapeutic agents – the artemisinins