Top Ten Things To Know
Infective Endocarditis in Adults: Diagnosis, Antimicrobial Therapy, and Management of Complications

1. Infective endocarditis (IE), a complex and potentially lethal disease, has undergone major changes in both the host patients and the pathogens involved.

2. Infective endocarditis (IE) is an uncommon infectious disease with an annual incidence ranging from 3 to 7 per 100,000 person-years.

3. Morbidity and mortality are increased with IE, and it is now the third or fourth most common life-threatening infection syndrome, after sepsis, pneumonia, and intra-abdominal abscess.

4. Globally, in 2010 IE was associated with 1.58 million disability-adjusted life years (DALYs) or years of healthy life lost due to death and non-fatal illness or impairment.

5. This scientific statement updates the 2005 AHA scientific statement “Infective Endocarditis: Diagnosis, Antimicrobial Therapy, and Management of Complications,” and will assist in the management of IE.

6. Several changes since the 2005 statement have impacted the current diagnosis, treatment, and management of IE:
   - Incidence of IE caused by Staphylococcus aureus has increased.
   - Health care contact is now a leading risk for infection.
   - Patient characteristics include an increased mean patient age, a higher proportion of prosthetic valves and other cardiac devices, and a decreasing proportion of rheumatic heart disease.
   - Increase in IE patients having surgery for IE to approximately 50%.

7. New studies have identified and validated improved approaches to diagnosis, prognosis, and treatments:
   - Diagnosis: three-dimensional echocardiography, "head-to-toe" multi-slice computed tomography (CT), and cardiac magnetic resonance imaging (MRI);
   - Diagnosis: three-dimensional echocardiography, “head-to-toe” multi-slice computed tomography (CT), and cardiac magnetic resonance imaging (MRI);
   - Diagnosis and Management: Role of cerebral MRI and magnetic resonance angiography (MRA);
   - Quantifying morbidity and mortality: risk stratification models validated, in particular, for those having valve surgery; and
   - New antibiotics being evaluated in clinical trials.

8. This statement includes a new section entitled “Surgical Therapy.” The decision to use surgical intervention is complex and considers clinical and prognostic factors. Timing of surgery is supported by limited evidence. Surgical intervention decisions should be made by a multidisciplinary team.

9. Both short- and long-term (months to years after medical treatment) follow-up is detailed. Long-term follow-up includes education, observation for recurrent infection and valve dysfunction, and symptoms of heart failure.

10. Because of the complexity of IE and the need for long-term follow-up, a multidisciplinary team of physicians and allied health providers representing different areas of expertise is needed for management.