Top Ten Things To Know
Prevention and Treatment of Thrombosis in Pediatric and Congenital Heart Disease

1. Thrombosis is recognized as a potentially life-threatening complication in children with congenital and acquired heart disease and in adults with CHD.

2. High risk groups include patients with shunt-dependent single ventricles, postoperative central lines, Fontan circulation, arrhythmias, Kawasaki Disease with coronary aneurysms and cardiomyopathy/myocarditis.

3. To date there is no published work that focuses solely on the important complication of thrombosis in children with congenital and acquired heart disease and in adults with CHD.

4. The intended audience for this document includes the multidisciplinary specialists who care for the child with congenital and acquired heart disease and the adult with CHD including pediatric and adult subspecialists in cardiology, critical care, cardiothoracic surgery, anesthesiology, hematology, general surgery, infectious diseases, and nursing.

5. Detection of neurologic injury in infants with CHD is challenging due to a lack of localizing clinical deficits in children less than 6 months of age. Magnetic resonance imaging (MRI) has been the most sensitive and accurate way to identify cerebral injuries. Seizures are often the only clinical manifestation of stroke in newborns and young infants.

6. In studies cited in this statement, children with heart disease who suffer a stroke had an increased prevalence of one of more prothrombotic abnormalities, and the risk of a recurrent stroke was greater in children with one or more prothrombotic risk factors.

7. Groups of infants and children with acquired or CHD are at risk for the development of pulmonary embolism as a result of risk factors unique to heart disease, including altered hemostasis and the presence of a central venous line (CVL).

8. When mechanical valves are used for valve replacement in children, anticoagulation is usually necessary to prevent thromboembolic complications, but even then, the patients remain at risk for thromboembolic complications and bleeding.

9. Special circumstances related to thromboprophylaxis include air travel, immobilization, oral contraceptives, pregnancy, obesity, and children and adults with developmental delay.

10. This scientific statement highlights the need for research on the etiology, risk factors, prevention, and treatment of thrombosis in children with heart disease and in adults with CHD.