

# Status Report: Cardiac Catheterization Project- Belize

*Written by Maria Vinall*

Belize is an independent country in Central America with a mixed-origin population of over 300,000, including native Indian, Spanish, and African. Until last year, there was no modern cardiac diagnostic or interventional facility in the country. Efforts have been underway, however, to install a mobile cardiac catheterization laboratory at the national tertiary/public hospital in Belize City. Adrian Coye, MD, Karl Huesner Memorial Hospital, Belize City, Belize, returned from Jamaica to his native Belize to initiate the effort. He and Dr. Bernard E. Bulwer, MD, also from the Karl Huesner Memorial Hospital, provided an update of the Belize Cardiac Catheterization project.

According to Dr. Bulwer, Belize still has many challenges, including infectious diseases, neurocirculatory dystonia, diabetes mellitus (13% of the population), hypertension (28%), and obesity (33%) [<http://new.paho.org/blz/>]. Women are more obese than men in all age groups. Garifuna, Creole, and East Asians are more likely to have hypertension and diabetes. East Asians, Mennonites, and Garifuna are more likely to have high cholesterol. To date, funding efforts have been focused on prevention, but they have been largely unsuccessful, resulting in high rates of heart failure, coronary artery disease, and chronic renal failure.

The effort to bring a cardiac cath lab to Belize has suffered from a lack of both political and institutional will. Offers for a fully refurbished cath lab came from many sources around the world but were unsuccessful for a variety of reasons. International collaboration, however, has been critical to meeting funding needs and in spurring the effort to bring the cardiac cath lab project to fruition.

In 2010, a mobile cardiac cath lab was donated, installed in Belize, and attached to the Karl Huesner Memorial Hospital. According to Dr. Coye, the hospital is committed to initiating services in CT surgery, including a phased approach to thoracic, adult cardiac, and noncomplex pediatric cardiac surgery. The hospital infrastructure is adequate, with no uninterruptible power supply, water, sanitation, or access issues. Security is well maintained, and all medical records are computerized. However, the facility needs maintenance, repairs, expansion, and additional equipment in the operating room and intensive care unit.

Dr. Coye also cites many other challenges. The hospital needs a trained cardiac perfusionist, as well as additional training for local anesthesiologists, intensivists, cardiologists, and nurses. The unit also needs to be outfitted and has to be financially sustainable.

The open-heart cardiac surgery project is expected to unroll in three stages: initiation of general thoracic surgery, followed by adult cardiac and noncomplex congenital heart surgery. During the first phase, visting teams will be required every month for 2 years to supplement the local staff while they gain experience and confidence. An outreach program is being planned to screen the population for cardiac disease, especially coronary, rheumatic, and congenital heart disease. The anticipated annual caseload is 100 to 150 per year.

The first 10 cases started in September with diagnostic procedures. This will evolve into interventional procedures, with parallel programs in permanent pacemakers, implantable cardiac devices, cardiac resynchronization therapy, interior vena cava filters, chemoports, cerebral angiography, peripheral vascular, and others. Cardiac surgery is expected to begin in July 2012, if not sooner.

Peer-Reviewed Highlights from the



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