EXPANDING OPTIONS FOR CARIBBEAN PATIENTS:
THE PURSUIT OF GLOBAL EQUITY IN CARDIOVASCULAR CARE
When it comes to caring for your heart and vascular health, **nothing is routine.**

Johns Hopkins heart and vascular experts understand that your patients are unique—whether they need preventive care, a minimally invasive procedure, or routine or more complex heart surgery. Our groundbreaking treatments offer adult and pediatric patients options beyond traditional therapies. **DISCOVER WHAT’S POSSIBLE.**

Convenient locations in Baltimore, Maryland; Washington, D.C.; and St. Petersburg, Florida.

**Resources for international clinicians:**

Sign up to receive the latest medical updates from Johns Hopkins Medicine:

hopkinsmedicine.org/international/breakthrough

Refer a patient or discuss a case with a Johns Hopkins expert:

+1-410-402-5041

hopkinsmedicine.org/international
## Table of Contents

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Messages</td>
<td>2</td>
</tr>
<tr>
<td>Conference Information</td>
<td>6</td>
</tr>
<tr>
<td>Organizing Committee</td>
<td>11</td>
</tr>
<tr>
<td>Faculty</td>
<td>13</td>
</tr>
<tr>
<td>Schedule at a Glance</td>
<td>14</td>
</tr>
<tr>
<td>Social Programme</td>
<td>15</td>
</tr>
<tr>
<td>Sponsors/Exhibitors</td>
<td>16</td>
</tr>
<tr>
<td>Past Honourees</td>
<td>17</td>
</tr>
<tr>
<td>Profile of Barbados</td>
<td>18</td>
</tr>
<tr>
<td>Past Presidents</td>
<td>19</td>
</tr>
<tr>
<td>Council Members</td>
<td>20</td>
</tr>
<tr>
<td>Conference Schedule</td>
<td>21</td>
</tr>
<tr>
<td>Official Opening Ceremony Programme</td>
<td>22</td>
</tr>
<tr>
<td>Abstracts</td>
<td>33</td>
</tr>
</tbody>
</table>
Dear Colleagues,

As we gather in Barbados at this moment, it is important to remember that our mission is to improve the health of the Caribbean people through the advancement of cardiovascular knowledge, practice and advocacy.

Over the past two years we have been intensely involved in activities in the international arena urging us to actively pursue our objectives. Clearly we are being pushed upward to achieve our mission, pursuing our common goals and building bridges to advance and share knowledge in the cardiovascular field.

This is reflected in the fact that education is offered by foreign peers and funding of studies in the Caribbean is sought after, if we can bring in the projects.

At this meeting in Barbados we are welcoming a diverse variety of specialists who are focusing on topics that touch us in the Caribbean. We do hope you will enjoy and learn from this experience, seeing our local and international colleagues presenting and joining in our informal discussion meetings in Barbados.

Last but not least we in the Caribbean are well known for our love of family, friends, parties and tradition. We therefore welcome you to join in the festive parties on the island of Barbados as it celebrates its Crop Over festival. Do take some time to enjoy this beautiful Island.

A warm welcome, as we would say from another Caribbean Island, Curacao, “Abraso” which means “big hug.”

Dr. Henry Steward  
President  
Caribbean Cardiac Society
Message from the Conference Chairman

Dear Colleagues;

On behalf of the Council and organising committee of the Caribbean Cardiac Society and the people of Barbados, I welcome you to the 31st Annual Caribbean Cardiology Conference. This is the fourth occasion that Barbados has hosted the conference and this year happens to coincide with our 50th year of Independence.

As a founding member of the Society who was present at the first conference in 1986 in Jamaica; and having attended most of the conferences throughout the years, I have seen the conference grow from being a “satellite” conference of the Commonwealth Caribbean Medical Research Council (CCMRC) meeting into an international cardiovascular conference now with its own “satellite” ECG Course and Interventional Cardiology Roundtable. This year a record number of abstracts were submitted for presentation from all over the Caribbean as well as Central and South America and the USA.

The delivery of equitable cardiovascular care continues to be a challenge in the region and this conference keeps us up to date with regional cardiology and also keeps its members in tune with “cutting edge” cardiovascular care and technology.

With the CCS now being an International Chapter of the American College of Cardiology, we are part of joint symposia at the American College of Cardiology (ACC) annual meeting and our profile has been significantly raised internationally. We are extremely pleased to have Dr. Kim Williams, Immediate Past President of the ACC, as one of our featured speakers at the conference.

We welcome you to our beautiful island. Enjoy the science and fellowship of the conference and our social events and please stay on over the weekend and enjoy our hospitality and our annual “crop over” festival.

Dr. Richard Ishmael
Conference Chairman
Vice-President
Caribbean Cardiac Society
Message from the President of the Barbados Association of Medical Practitioners

Dear Friends and Colleagues,

On behalf of the Barbados Association of Medical Practitioners, it gives me great pleasure to extend to you all a very warm welcome to the 31st Caribbean Cardiology Conference and to Barbados.

I wish to take this opportunity to extend a very special welcome to the invited faculty and distinguished participants.

No matter how much we can do by ourselves as an individual, or at the national level, whether it be clinical practice or research, it is never enough. And, in a spirit of true cooperation, we in this region of the world have joined in many efforts to take action and solve the problems that beset the people of our small island states. This 31st Conference hosted by the Caribbean Cardiac Society is a true embodiment of one such effort. This example shows, to my mind, what can be achieved when perseverance and a dedicated approach are joined in marriage.

I have used ‘poetic license’ to combine two sentences from The Caribbean Commission on Health and Development – Final Report; “As a whole the Caribbean appears to suffer from high levels of CVD burden. But the Caribbean countries, though small and in many ways disadvantaged, are convinced that their health horizons should not be limited by some notion of what is the upper bound appropriate for them.”

It is gratifying therefore to note that the agenda of the conference covers a wide range of very interesting items and I would like to take the opportunity to congratulate the organising committee for bringing together experts to help us overcome many of the problems we encounter in the management of our patients’ cardiovascular disorders. The result, it is hoped, will be to the benefit of the peoples of those countries represented here.

In concluding, I wish you every success in your deliberations and a very pleasant stay in Barbados.

Dr. P. Abdon DaSilva
President
Barbados Association of Medical Practitioners
INNOVATION FOR TOMORROW

Miami Cardiac & Vascular Institute at Baptist Health South Florida has advanced care in the region for nearly 30 years – keeping innovation and the highest quality at the heart of everything we do. The Institute is composed of a multidisciplinary team of physicians who have achieved international acclaim for their breakthrough research and impact on cardiovascular care. Experience the advantage of our commitment to helping patients lead healthy lives.

Call Baptist Health International at 786-596-2373 today to see one of our experts or learn more by visiting BaptistHealth.net/Heart
Conference Information

About the Conference
This educational activity is designed to inform, educate and update the Caribbean’s cardiac care professionals on emerging treatments, modalities, diagnostic techniques and equipment appropriate for the optimization of the diagnosis, treatment and management of the cardiovascular patient in the Caribbean. The approaches, treatments and diagnostic tools discussed will be assessed for their applicability and accessibility within the Caribbean.

Accreditation Statement
The 31st Annual Caribbean Cardiology Conference will be planned and implemented in accordance with the essential policies of the Accreditation Committee of the Medical Council of Jamaica through the Caribbean Cardiac Society. Each participant should claim only those hours that he/she actually spent in the activity.

Evaluations and CME Certificates
Participants will be asked to complete evaluations electronically at the conclusion of the conference and CME certificates will be sent by e-mail at the conclusion of the meeting. Please ensure that you provided a correct email address at registration.

Faculty Disclosures
All participating faculty are expected to disclose to the programme’s audience any real or apparent conflict of interest that may have direct bearing on the subject matter of their presentation.

These disclosures are not intended to suggest or condone bias in any presentation, but rather are made to provide participants with information that might be of potential importance in their evaluation of a presentation.

Disclosure of Potential Conflict of Interest
The following speakers HAVE indicated the listed relationship, which pose a potential conflict of interest.

- **Rimal B. Bera**  
  **Speaker’s Bureau:** Otsuka, Allergan, Sunovion

- **Margarita Camacho**  
  **Consultant:** Sunshine Heart, Inc.

- **Jose Ettedgui**  
  **Consultant:** St. Jude Medical

- **Raul Garillo**  
  **Consultant:** Medtronic

- **Robert Giugliano**  
  **Grant/Research Support:** Amgen, Merck  
  **Consultant:** Amgen, BMS, CVS Caremark, GSK, Lexicon, Merck, Pfizer  
  **Speaker’s Bureau:** Amgen, AstraZeneca, Abbott, Volcano

- **Gregory Giugliano**  
  **Consultant:** AstraZeneca, Volcano  
  **Speaker’s Bureau:** Amgen, AstraZeneca, Abbott, Volcano

- **Luis Gutiérrez Jaikel**  
  **Other:** Proctor Medtronic
The following speakers have indicated that they DO NOT HAVE such a relationship to disclose:

Franklyn Agustin Colon Arias
Aylwin Benjamin
Lana Boodhoo
Clement Bourguignon
Randall Bryant
Karen Collins
Robert Cubeddu
Jamie Decker
Legena Henry
Alok Kumar
Sasha Lalla
Ysailis Mariñez
Monica Mukherjee
Nathalie Ozier-Lafontaine
Julio Nicolas Perez Valerio
Cynthia Rosario
Rhea Sancassani
Edward Savage
Michael Shillingford
Gerald Smetana
Alan Smith
Shaun Smithson
Marcus St John
Sripadh Upadhya
Samuel Zorrilla Bautista

Faculty not listed above HAVE NOT completed Faculty Disclosures and will be required to do so prior to making their presentation. In absence of a written disclosure they will be required to disclose verbally, before they present, any potential conflicts of interest and any discussion of off-label products.

Registration & Secretariat Hours
The Secretariat is located in the Hibiscus Room.

<table>
<thead>
<tr>
<th>Day</th>
<th>Date</th>
<th>Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>July 25, 2016</td>
<td>2:00pm - 5:00pm</td>
</tr>
<tr>
<td>Tuesday</td>
<td>July 26, 2016</td>
<td>7:00am - 5:00pm</td>
</tr>
<tr>
<td>Wednesday</td>
<td>July 27, 2016</td>
<td>7:00am - 5:00pm</td>
</tr>
<tr>
<td>Thursday</td>
<td>July 28, 2016</td>
<td>7:00am - 5:00pm</td>
</tr>
<tr>
<td>Friday</td>
<td>July 29, 2016</td>
<td>7:00am - 5:00pm</td>
</tr>
</tbody>
</table>

Function Tickets
Social event tickets can be purchased from the Secretariat at any time during the opening hours listed above.
Name Badges
Your name badge serves as your passport to all educational sessions and the exhibit area. You must wear your name badge at all times. Social function tickets will be included in the name tag holders and must be presented at each event. Participants will not be admitted to social functions without the appropriate ticket.

<table>
<thead>
<tr>
<th>Color</th>
<th>Registration Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Blue</td>
<td>Full Registration</td>
</tr>
<tr>
<td>Grey</td>
<td>Guest Registration</td>
</tr>
<tr>
<td>Yellow</td>
<td>Exhibitor Registration</td>
</tr>
<tr>
<td>Green</td>
<td>One Day – Thursday</td>
</tr>
<tr>
<td>Orange</td>
<td>One Day – Friday</td>
</tr>
<tr>
<td>Purple</td>
<td>One Day – Saturday</td>
</tr>
<tr>
<td>Red</td>
<td>Staff</td>
</tr>
</tbody>
</table>

As in any metropolitan area, we recommend for your safety that you do not wear your name badge in public (outside of the hotel/Conference function areas).

Refunds and Exchanges
Refunds will not be issued until after the Conference. Tickets for Conference social events are NOT refundable.

Dress Code
Business casual dress is encouraged for conference sessions. Meeting rooms can get quite cold so attendees are reminded to take with them an extra layer, a light jacket or a sweater. The Annual Awards Banquet is a formal event while the Conference Party is casual.

Child Policy
Children are not allowed in Meeting Rooms or Exhibit Halls. Children’s tickets can be purchased for the Conference Dinner & Party at the Conference Secretariat in the Hibiscus Room.

Lost and Found
If you have lost or found an item, please contact the Conference Secretariat in the Hibiscus Room.

No Smoking Policy
The Caribbean Cardiac Society promotes a No Smoking policy. The use of tobacco products or any type of electronic nicotine delivery system is strictly prohibited in the Conference Centre, all hotel meeting rooms and venues hosting CCS events. Thank you for your compliance.
Transforming healthcare, changing lives.

We understand many people throughout the Caribbean require specialist care they may not be able to obtain at home. Traveling for healthcare can be costly and stressful. Our vision is to shape the way the world experiences healthcare. From our world-class facility and latest diagnostic technology, combined with some of the world’s most experienced physicians, our team provides the highest level of patient care. No matter where you are travelling from, we work with our patients and their doctors every step of the way to provide an easy and stress-free healthcare experience.

NON-EMERGENCY SURGERY & PROCEDURES

- Adult & Pediatric Cardiology
- Electrophysiology
- Adult & Pediatric Cardiothoracic Surgery
- Orthopedics & Sports Medicine
- Neurosurgery & Spine Surgery
- Neurology
- Pediatric Endocrinology
- Pulmonology & Sleep Lab
- GI & Bariatric Surgery
- Medical Oncology
- Urology including HIFU
- Renal Denervation
- Executive Health Checks
- Hepatitis C & HIV Treatment

RENAL DENERVATION

Renal denervation is a minimally invasive endovascular catheter based procedure used to treat severe hypertension. We are the only facility in the Caribbean offering this treatment and it is not currently offered in the US.

ELECTROPHYSIOLOGY

Our advanced electrophysiology services provide a safe and effective way to detect, track and manage cardiac arrhythmias.

Welcome to world-class, destination healthcare.

Call one of our Patient Care Coordinators at 1 (844) 945-4040 (toll free) or visit us at www.healthcitycaymanislands.com
Helpful Phone Numbers

**Airlines**

<table>
<thead>
<tr>
<th>Airlines</th>
<th>Phone Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Air Canada</td>
<td>246-428-5077</td>
</tr>
<tr>
<td>American Airlines</td>
<td>246-428-4170</td>
</tr>
<tr>
<td>British Airways</td>
<td>1-800-247-9297</td>
</tr>
<tr>
<td>Caribbean Airlines</td>
<td>1-800-744-2225</td>
</tr>
<tr>
<td>Delta Airlines</td>
<td>246-482-2244</td>
</tr>
<tr>
<td>LIAT Limited</td>
<td>1-888-844-5428</td>
</tr>
<tr>
<td>Virgin Atlantic Airways</td>
<td>246-418-8505</td>
</tr>
</tbody>
</table>

**Meals at Hilton Barbados**

Conference Registration includes coffee breaks. During lunch breaks a light lunch will be served outside the exhibit hall. Meals can also be purchased at the Hilton Barbados’ restaurant outlets.

**WiFi and Social Media**

WiFi will be available in the meeting room and exhibit hall. Follow us on Facebook, tweet at us @CaribCardiac, and use the hashtag #CCSBarbados16 to engage with faculty, staff and your fellow attendees.
Organizing Committee

Dr. Richard Ishmael
Barbados

Dr. Henry Steward
Curaçao

Dr. Ronald Henry
Trinidad & Tobago

Dr. Marilyn Lawrence-Wright
Jamaica

Dr. Victor Elliott
Jamaica
Promus PREMIER™
Everolimus-Eluting Platinum Chromium Coronary Stent System

PREMIER Architecture.
PREMIER Outcomes.

For more information, go to www.bostonscientific.com/PromusPREMIER-US
Invited Faculty

ANNUAL CARDIAC SURGERY LECTURE
Dr. Michael Shillingford
University of Florida

OPENING KEYNOTE LECTURE
Dr. Gerald Smetana
Beth Israel Deaconess Medical Center

ANNUAL CARDIOLOGY LECTURE
Dr. Kim Williams
Rush University Medical Center

Dr. Jamie Decker
All Children’s Heart Institute

Dr. Raul Garillo
Pontificia Universidad Católica Argentina

Dr. Robert Giugliano
Brigham and Women’s Hospital

Dr. Luis Guiterrez-Jaikel
Hospital Mexico

Dr. Monica Mukherjee
Johns Hopkins University School of Medicine
Social Programme

Tuesday July 26, 7:00PM - 10:00PM
The Official Opening will be held in the Needham’s Ballroom
Welcome Reception to follow. Attire: Lounge suit

Thursday July 28, 7:30PM - 11:00PM
The Annual Awards Banquet will be held in the Needham’s Ballroom.
Attire: Formal

Friday July 29, 5:30PM - 11:00PM
The CCS Conference Dinner and Party will be held at Atlantic Shores, Christ Church
Buses depart from the Hilton lobby at 5pm Attire: Casual

For those who do not have banquet and party tickets included in their registration or require additional tickets, they can be purchased at the Conference Secretariat in the Hibiscus Room. Tickets will not be sold at the door. Please remember to bring your tickets to be presented on entry to both functions.

Special Dietary Requirements
Individuals with special dietary requirements must request special meals (vegetarian/vegan/fruit) 24 hours in advance at the Conference Secretariat. We regret that requests for special meals not made in advance may not be honoured.

Connecting International Patients To World-Class Cardiology Care

...And Providing The Caribbean Basin’s ONLY Destination For Trauma Medical Services

Miami’s our home town – and a home base for the Jackson/UHealth International team – where thousands of patients from around the world come to access expert care. Together with you and the rest of our global network of physicians, we help patients receive groundbreaking treatments like cardiac surgery and heart transplantation, strengthen our unique medical concierge and hospitality program, and grow our international network.

And as our patients heal, we remain at-the-ready for their follow-up care with six hospitals, multiple specialty care centers, and two long-term care centers. We’re always here for you and your patients. Call +1 305-355-1212 to discuss inpatient and outpatient referrals today.

www.JacksonInternational.org

Miracles made daily.
Sponsors & Exhibitors

PLATINUM

GOLD

SILVER
Jackson Health System – Jackson International
MSD

EXHIBITOR
Abbott
American Hospital Supply / Bryden Stokes Ltd.
Baptist Health South Florida
Biomedical International Corp.
Boehringer Ingelheim (Canada) Ltd.
Boston Scientific del Caribe
Cleveland Clinic Florida
Health City Cayman Islands
HeartWare
Holy Cross Hospital
Memorial Healthcare System
Merck
Pfizer
Reva Air Ambulance
Roche Diagnostics Central America & Caribbean
Sanofi
Servier Caribbean Ltd.
St. Jude Medical
### Past Honourees

<table>
<thead>
<tr>
<th>Year</th>
<th>Name</th>
<th>Institution/Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>1991</td>
<td>Prof. Mario Garcia Palmieri</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
<tr>
<td></td>
<td>Sir Kenneth Stuart</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dr. H.A.L. McShire</td>
<td></td>
</tr>
<tr>
<td>1995</td>
<td>Prof. Sir Magdi Yacoub</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
<tr>
<td></td>
<td>Dr. Theo Poon King</td>
<td></td>
</tr>
<tr>
<td>1999</td>
<td>Dr. S. Sivapragasm</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
<tr>
<td></td>
<td>Dr. Winston Ince</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dr. Tarcisio Kroon</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dr. Keith McKenzie</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dr. George Wattley</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
<tr>
<td></td>
<td>Dr. Cyril Nelson</td>
<td></td>
</tr>
<tr>
<td>2000</td>
<td>Dr. Cecil Bethel</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2001</td>
<td>Dr. Donald Christian</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
<tr>
<td></td>
<td>Dr. Richard Haynes</td>
<td></td>
</tr>
<tr>
<td>2002</td>
<td>Dr. James Ling</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
<tr>
<td></td>
<td>Dr. Michael Wooming</td>
<td></td>
</tr>
<tr>
<td>2003</td>
<td>Dr. Yves Donatien</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
<tr>
<td></td>
<td>Prof. Edwin Besterman</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Prof. Howard Spencer</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>Prof. Trevor Austin Hassell</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
<tr>
<td></td>
<td>Dr. Roy Tilluckdharry</td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>Dr. Robert Giugliano</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2006</td>
<td>Prof. Gerald Grell</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
<tr>
<td></td>
<td>Dr. Dominique Larifla</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Dr. Phillipe Cohen-Tenoudji</td>
<td></td>
</tr>
<tr>
<td>2007</td>
<td>Dr. Knox Hagley</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
<tr>
<td></td>
<td>Mrs. Phyllis Francis</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Cardiology Unit, University Hospital</td>
<td></td>
</tr>
<tr>
<td>2008</td>
<td>Prof. Charles Denbow</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
<tr>
<td></td>
<td>Mrs. Cynthia Hassett</td>
<td></td>
</tr>
<tr>
<td>2009</td>
<td>Dr. Ronald Henry</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
<tr>
<td></td>
<td>Dr. Richard Ishmael</td>
<td></td>
</tr>
<tr>
<td>2010</td>
<td>Dr. Edward Chung</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
<tr>
<td></td>
<td>Mrs. Beverley Dinham-Spencer</td>
<td></td>
</tr>
<tr>
<td>2011</td>
<td>Prof. Howard Spencer</td>
<td>Centre Hospitalier Universitaire de Fort-de-France</td>
</tr>
</tbody>
</table>
Profile of Barbados

The Barbados Tourism website describes Barbadians as the official ambassadors of how to live life: they have mastered the art of fine living, and offer “daily lessons for those who seek to do the same.” Barbados offers a vibrant culture; passionate in spirit and full of life, where luxury and exceptional culinary delights mingle among lush tropical greenery, clear blue waters, and warm golden sunlight.

Barbados is the easternmost island of the Caribbean, and is the only island not touched by the Caribbean Sea at all (it is completely surrounded by the Atlantic Ocean). The island is geologically unique, being actually two land masses that merged together over the years. It was created by the collision of the Atlantic crustal and Caribbean plates, along with a volcanic eruption. Later, coral formed, accumulating to approximately 300 feet. The island is about 100 km east of the Windward Islands and about 400 km north-east of Trinidad and Tobago. Barbados is 166 square miles (431 square km): 21 miles long and 14 miles wide; or as they say in Barbados 21 miles long and a smile wide.

The island was uninhabited when first settled by the British in 1627. African slaves worked the sugar plantations established on the island until 1834, when slavery was abolished. The economy remained heavily dependent on sugar, rum, and molasses production through most of the 20th century. Many people were drawn to Barbados because of the climate and slow pace of life. The island was thought of as a cure for "the vapours". The gradual introduction of social and political reforms in the 1940s and 1950s led to complete independence from the UK in 1966. In the 1990s, tourism and manufacturing surpassed the sugar industry in economic importance.

The Barbadian capital city of Bridgetown, located in St. Michael, was originally named "Indian Bridge" for the bridge that had been constructed over the river by early Indian settlers. Sometime after 1654, a new bridge was constructed and the name Bridgetown was born.

Drawing on its English, African and West Indian roots, Barbados has established its own distinctive identity, evidenced in its customs, traditions and values, and passionately expressed through the rich history, exceptional cuisine and artistic talents of its people. The history of rum in Barbados, and Barbados itself are forever entwined. First made 370 years ago from the sugar cane that populated the island, Barbados rum soon found the favour of many English sailors who, as legend tells it, offered their bounty of rum as proof that they had crossed the Atlantic. But it wasn’t until 1703, when Mount Gay Rum began distilling the oldest brand of rum in existence, that the world would come to recognize Barbados as the true birthplace of rum.

While one can circuit the entire island in a few hours, do reserve an entire day to tour Barbados – from the underground (Harrison’s Caves), to the undersea (Atlantis submarine tours), to the cities and inland. A popular place to go for a lime on Friday and Saturday nights is the fish fry at Oistins, which offers a fun and unique blend of music, atmosphere and food for both locals and visitors alike.

Quick facts on Barbados
Capital - Bridgetown
Currency - Barbadian Dollar
Area - (total) 431 sq. km (166 sq. mi)
Terrain - Relatively flat; rises gently to the central highland region
Population - 289,680 (July 2014 est.)
Language - English

http://www.barbados.org/index.html
http://www.indexmundi.com/barbados/background.html
http://www.visitbarbados.org/
Caribbean Cardiac Society Past Presidents

Dr. Donald Christian
Jamaica
1989 - 1992

Prof. Trevor Hassell
Barbados
1992 - 1994

Dr. Roy Tilluckdharry
Trinidad & Tobago
1994 - 1996

Prof. Howard Spencer
Jamaica
1996 - 2000

Dr. Yves Donatien
Martinique
2000 - 2002

Dr. Ivan Perot
Trinidad & Tobago
2002 - 2004

Dr. Edward Chung
Jamaica
2004 - 2006

Dr. Conville Brown
The Bahamas
2006 - 2008

Dr. Martin Didier
St. Lucia
2008 - 2010

Dr. Raymond Massay
Barbados
2010 - 2012

Dr. Ronald Henry
Trinidad & Tobago
2012 - 2014
Council of the Caribbean Cardiac Society

Dr. Henry Steward
President
Curacao

Dr. Richard Ishmael
Vice President
Barbados

Dr. Pravinde Ramoutar
Secretary
Trinidad & Tobago

Dr. Marilyn Lawrence-Wright
Treasurer
Jamaica

Dr. Ronald Henry
Immediate Past President
Trinidad & Tobago

Dr. Martin Didier
St. Lucia

Dr. Mercedes Dullum
USA

Dr. Victor Elliott
Jamaica

Dr. Kendall Griffith
US Virgin Islands

Dr. Jocelyn Inamo
Martinique

Dr. Caroline Lawrence
St. Kitts and Nevis

Dr. Raymond Massay
Barbados

Dr. Jeanice Stanley-Jean
St. Lucia

Dr. Roy Tilluckdharry
Trinidad & Tobago
Conference Schedule

**TUESDAY JULY 26**

**INTERVENTIONAL ROUNDTABLE**
9:00AM – 11:30AM  
Needham’s Ballroom  
MODERATOR: Dr. Vladimir Dzavik

**ECG SESSION**  
1:00PM – 5:00PM  
Peninsula Room

**CONFERENCE OPENING CEREMONY**  
7:00PM – 8:30PM (RECEPTION TO FOLLOW)  
Needham’s Ballroom

**CONFERENCE WELCOME RECEPTION**  
8:30PM – 10:00PM  
Needham’s Ballroom Pre-Function Area
31st Caribbean Cardiology Conference
Official Opening Ceremony & Welcome Reception

Tuesday July 26, 7:00pm
Needham’s Ballroom
Hilton Barbados

PROGRAMME

National Anthem of Barbados

Opening Remarks
Dr. Richard Ishmael
Conference Co-Chairperson

President’s Remarks
Dr. Henry Steward
President
Caribbean Cardiac Society

Welcome Remarks
Dr. P. Abdon DaSilva
President
Barbados Association of Medical Practitioners

Roll Call
Dr. Pravinde Ramoutar
Secretary
Caribbean Cardiac Society

Ethnic Disparities in Hypertension

Keynote Lecture
Dr. Gerald Smetana
International Ambassador
American College of Physicians
Beth Israel Deaconess Medical Center

Official Opening

Vote of Thanks
Dr. Raymond Massay

Reception follows immediately.
Just in case

PRAXBIND (idarucizumab) is an antidote specific for dabigatran, and is indicated for just in case adult patients treated with PRADAXA® (dabigatran etexilate) when rapid specific reversal of the anticoagulant effects of dabigatran is required for:
- Emergency surgery/urgent procedures
- Life-threatening or uncontrolled bleeding

PRAXBIND has been issued marketing authorization with conditions, pending the final clinical trial results to verify its reversal effect in patients and promising evidence of clinical benefit. Patients should be advised of the conditional nature of the authorization.
For further information on PRAXBIND please refer to Health Canada’s Notice of Compliance with conditions – drug products website.

PRADAXA is indicated for the prevention of stroke and systemic embolism in patients with atrial fibrillation, in whom anticoagulation is appropriate.


The first and only NOAC with an AGENT SPECIFIC ANTIDOTE™

*Comparative clinical significance is unknown.
PRAXBIND® is a trademark and PRADAXA® is a registered trademark used under license by Boehringer Ingelheim (Canada) Ltd.
### SCIENTIFIC SESSION 1

**8:00AM – 9:00AM**  
Needham’s Ballroom  
**CHAIRPERSON:** Dr. Richard Ishmael

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
</table>
| 8:00 – 8:10 | Aylwin Benjamin  
Barbados | Evolution of Cardiac Implants in a Resource Poor Setting – "Damned If You Do, Damned If You Don't" |
| 8:10 – 8:20 | Lana Boodhoo  
Trinidad and Tobago | The Diagnostic Yield of Tilt-Table Testing in Trinidad and Tobago    |
| 8:20 – 8:30 | Raul Garillo  
Argentina | DISCUSSION                                                              |
| 8:30 – 8:55 | Raul Garillo  
Argentina | The Five Answers That Should Be Known Before the Indication of a CRT |
| 8:55 – 9:00 |                               | DISCUSSION                                                              |

### SCIENTIFIC SESSION 2

**9:00AM – 10:15AM**  
Needham’s Ballroom  
**CHAIRPERSON:** Dr. Jeanice Stanley-Jean

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
</table>
| 9:05 – 9:35 | Gregory Giugliano  
USA | Cardiovascular Clinical Trials 2015 Year in Review                   |
| 9:35 – 9:45 |                               | DISCUSSION                                                              |
| 9:45 – 9:55 | Samuel Zorrilla Bautista  
Dominican Republic | Patterns of Diagnostic Evaluation in Suspected Syncope               |
| 9:55 – 10:05 | Raul Garillo  
Argentina | Diagnostic Value of Implantable Loop Recorder in Patients With Recurring Syncope of Unknown Cause |
| 10:05 – 10:15 |                               | DISCUSSION                                                              |
| 10:15 – 11:00 |                               | COFFEE BREAK                                                            |

### ANNUAL CARDIOLOGY LECTURE

**11:00AM – 11:45AM**  
Needham’s Ballroom  
**CHAIRPERSON:** Dr. Henry Steward

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
</table>
| 11:00 – 11:45 | Kim Williams  
USA  
Immediate Past-President  
American College of Cardiology  
Annual Cardiology Lecture | Dyssynchrony Imaging in Heart Failure with Nuclear Techniques |
## LUNCH BREAK – VIEWING OF EXHIBITS AND POSTERS
11:45PM – 1:00PM

## SCIENTIFIC SESSION 3
1:00PM – 2:30PM
Needham’s Ballroom

**CHAIRPERSON: Dr. Ronald Henry**

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 – 1:10</td>
<td>Margarita Camacho</td>
<td>Expanding Left Ventricular Assist Device Therapy in the Caribbean for Treatment of Advanced Heart Failure</td>
</tr>
<tr>
<td>1:10 – 1:20</td>
<td>Julien Fabre <em>Martinique</em></td>
<td>Epidemiological and Hemodynamic Features of Pulmonary Hypertension in the Caribbean</td>
</tr>
<tr>
<td>1:20 – 1:40</td>
<td>Neil Galindez <em>USA</em></td>
<td>Advanced Heart Failure Therapy: The LVAD Revolution&lt;br&gt;Tenet Healthcare Sponsored Lecture</td>
</tr>
<tr>
<td>1:40 – 1:50</td>
<td></td>
<td><strong>DISCUSSION</strong></td>
</tr>
<tr>
<td>1:50 – 2:00</td>
<td>Shaun Smithson <em>USA</em></td>
<td>&quot;CARDIOMEMS&quot; a Novel Device to Reduce Heart Failure Admissions</td>
</tr>
<tr>
<td>2:00 – 2:20</td>
<td>Richard Ishmael <em>Barbados</em></td>
<td>A &quot;Stand Alone&quot; Cardiac Catheterisation Laboratory in a Small Island Community.</td>
</tr>
<tr>
<td>2:20 – 2:30</td>
<td></td>
<td><strong>DISCUSSION</strong></td>
</tr>
</tbody>
</table>

## CCS BIENNIAL GENERAL MEETING
3:00PM – 4:00PM
Needham’s Ballroom
CEDIMAT Cardiovascular Center

An innovative institution designed for the care of the heart

Technology, medical advances and professional hands merge in this Dominican health center, listed among the most complete in the Caribbean and Central America in the treatment of heart diseases.

Instinctively, humans have always tried to stay healthy, however often the heart and its health is neglected. We at CEDIMAT are always thinking about this and looking for ways to care and prevent disease.

30,109 square meters of construction, with seven levels for the care and treatment of cardiovascular disease.

The Centers for Diagnoses and Advanced Medicine and Medical Conferences and Telemedicine (CEDIMAT) put into operation its Cardiovascular Center with goal of reducing these conditions in the Dominican Republic and the Caribbean as well as establishing guidance to their prevention.
Some of the innovations of this new facility include automatization that monitors and controls most of its structure, from air conditioners, detection and fire suppression, emergency generators, and refrigeration of supplies. It also has five operating rooms, four CAT labs, 35 ICU and a Chest Pain Unit as well as the sterilization center the largest in the Caribbean.

As far as capacity, it is the largest in the area because it has 180 beds.

In regards to diagnostic imaging capacity, CEDIMAT has the most advanced CT scanner (128 slice scanner), the latest X-ray and angiographic digital equipment and 3D ecocardiography.

In addition, other standard cardiac tests, clinical laboratory, nuclear cardiology and electrocardiography are also available.

Also designed for children

The increasing rates of cardiovascular disease not only affect adults, Heart Problems in children are growing as a result of congenital heart and other conditions. It is for that reason that the search for a cure and effective treatments for pediatric cardiac conditions remain a topic of interest for our experts.

CEDIMAT has designed an entire floor for the care and attention of these children. The pediatric level includes consultations and examinations, operating rooms, intensive care units (ICU), Intermediate Care, hospital rooms and two areas for interactive games; all in order to restore children welfare.

The recovery phase

We do not only offer consultation and diagnosis, but also follow-up after any surgical or interventional procedure. Our center’s philosophy is to provide a comprehensive, reason why we have created a therapeutic garden and the center for cardiopulmonary rehabilitation, unique in the Dominican territory.
## SCIENTIFIC SESSION 4
8:00AM – 9:00AM
Needham’s Ballroom
CHAIRPERSON: Dr. Dawn Scantlebury

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 – 8:10</td>
<td>Roberto Cubeddu&lt;br&gt;USA</td>
<td>Interventional Therapies in Stroke Prevention: Watchman and PFO Closure</td>
</tr>
<tr>
<td>8:10 – 8:20</td>
<td>Jose Ettedgui&lt;br&gt;USA</td>
<td>Transcatheter Closure of Patent Foramen Ovale in Adults Using an Amplatzer Atrial Septal Occluder</td>
</tr>
<tr>
<td>8:20 – 8:30</td>
<td></td>
<td>DISCUSSION</td>
</tr>
<tr>
<td>8:30 – 8:40</td>
<td>Sripadh Upadhya&lt;br&gt;Cayman Islands</td>
<td>Our Experience: 42 Haitian Children With Heart Disease Treated at Health City</td>
</tr>
<tr>
<td>8:40 – 8:50</td>
<td>Cynthia Rosario&lt;br&gt;Dominican Republic</td>
<td>Interrupted Like Coarctation Aortic Arch Done Percutaneously: Case Presentation Pediatric Cardiology</td>
</tr>
<tr>
<td>8:50 – 9:00</td>
<td></td>
<td>DISCUSSION</td>
</tr>
</tbody>
</table>

## SCIENTIFIC SESSION 5
9:00AM – 10:25AM
Needham’s Ballroom
CHAIRPERSON: Dr. Raymond Massay

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:05 – 9:15</td>
<td>Randall Bryant&lt;br&gt;USA</td>
<td>&quot;Hybrid&quot; Management of Malignant Ventricular Arrhythmias in a 16-Month Old Trinidadian With Left Ventricular Noncompaction Cardiomyopathy</td>
</tr>
<tr>
<td>9:15 – 9:35</td>
<td>Jamie Decker&lt;br&gt;USA</td>
<td>Sudden Death in Children and Young Adults: What Can We Do Johns Hopkins Medicine Sponsored Lecture</td>
</tr>
<tr>
<td>9:35 – 9:45</td>
<td></td>
<td>DISCUSSION</td>
</tr>
<tr>
<td>9:45 – 9:55</td>
<td>Richard Ishmael&lt;br&gt;Barbados</td>
<td>Interventional Cardiology for Congenital Heart Disease (CHD)-Experience at Bracebridge Medical Centre (BMC) in Barbados.</td>
</tr>
<tr>
<td>9:55 – 10:05</td>
<td>Jose Ettedgui&lt;br&gt;USA</td>
<td>Congenital Heart Surgery in the Caribbean: Ten Year Experience at Wolfson Children’s Hospital</td>
</tr>
<tr>
<td>10:05 – 10:15</td>
<td>Alok Kumar&lt;br&gt;Barbados</td>
<td>Critical Congenital Heart Disease Among Neonates Detected in the First Few Days of Life in Barbados: Prevalence, Pattern and Outcome</td>
</tr>
<tr>
<td>10:15 – 10:25</td>
<td></td>
<td>DISCUSSION</td>
</tr>
<tr>
<td>10:25 – 11:00</td>
<td></td>
<td>COFFEE BREAK</td>
</tr>
</tbody>
</table>
**ANNUAL CARDIAC SURGERY LECTURE**

11:00AM – 11:45AM  
Needham’s Ballroom  
CHAIRPERSON: Dr. Richard Ishmael

<table>
<thead>
<tr>
<th>Time</th>
<th>Lecturer</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:00 – 11:45</td>
<td>Michael Shillingford</td>
<td>Surgery for Adults with Congenital Heart Disease</td>
</tr>
<tr>
<td></td>
<td>USA</td>
<td>Annual Cardiac Surgery Lecture</td>
</tr>
</tbody>
</table>

**LUNCH BREAK - VIEWING OF EXHIBITS**

11:45PM – 1:00PM

**SCIENTIFIC SESSION 6**

1:00PM – 2:00PM  
Needham’s Ballroom  
CHAIRPERSON: Dr. Victor Elliott

<table>
<thead>
<tr>
<th>Time</th>
<th>Lecturer</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 – 1:30</td>
<td>Luis Gutierrez-Jaikel</td>
<td>TAVI in Costa Rica – Our Experience With Corevalve / Evolut-R Devices</td>
</tr>
<tr>
<td></td>
<td>Costa Rica</td>
<td>Medtronic Sponsored Lecture</td>
</tr>
<tr>
<td>1:30 – 1:40</td>
<td>Sasha Lalla</td>
<td>Traumatic Aortic Valve Cusp Rupture: A Rare Clinical Entity</td>
</tr>
<tr>
<td>1:50 – 2:00</td>
<td>Ysailis Mariné</td>
<td>ON-X Prosthetic Aortic Valve Replacement in the Young: Safety of Limited Anticoagulation Followed by Antiplatelet Therapy Alone</td>
</tr>
</tbody>
</table>

**DISCUSSION**

**SCIENTIFIC SESSION 7**

2:10PM – 3:20PM  
Needham’s Ballroom  
CHAIRPERSON: Dr. Conville Brown

<table>
<thead>
<tr>
<th>Time</th>
<th>Lecturer</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:15 – 2:30</td>
<td>Brijeshwar Maini</td>
<td>Advanced Treatments in Atrial Fibrillation</td>
</tr>
<tr>
<td></td>
<td>USA</td>
<td>Tenet Healthcare Sponsored Lecture</td>
</tr>
<tr>
<td>2:30 – 2:40</td>
<td>Hakop Hrachian</td>
<td>Ablation vs Medical Therapy for Treatment of Atrial Fibrillation in Patients With Congestive Heart Failure (CHF) or Chronic Obstructive Pulmonary Disease (COPD) Directed From Emergency Department (ED) ED-AF Trial</td>
</tr>
<tr>
<td>2:40 – 2:50</td>
<td></td>
<td>DISCUSSION</td>
</tr>
<tr>
<td>2:50 – 3:00</td>
<td>Sumit Modi</td>
<td>Surgery for Paroxysmal Atrial Fibrillation in the Setting of Mitral Valve Disease: A Role for Pulmonary Vein Isolation?</td>
</tr>
<tr>
<td>3:00 – 3:10</td>
<td>Roberto Cubeddu</td>
<td>Mitraclip: Who, What, When, Where and How?</td>
</tr>
<tr>
<td>3:10 – 3:20</td>
<td></td>
<td>DISCUSSION</td>
</tr>
</tbody>
</table>
### SCIENTIFIC SESSION 8
8:00AM – 9:00AM
Needham’s Ballroom
CHAIRPERSON: Dr. Romel Daniel

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00</td>
<td>Julio Perez Valerio</td>
<td>Retrospective Analysis of Clinical Features and Efficacy of Radiofrequency Ablation in Paediatric Patients With Supraventricular Arrhythmias Including Abnormal Pathways in a Tertiary Center</td>
</tr>
<tr>
<td>8:10</td>
<td>Karen Collins</td>
<td>Brugada Syndrome: A Case Series Covering 13 Years of Experience</td>
</tr>
<tr>
<td>8:30</td>
<td>Rhea Sancassani</td>
<td>Non-Vitamin K Antagonist Oral Anticoagulants in Valvular Atrial Fibrillation: Current Data and What’s on the Horizon</td>
</tr>
</tbody>
</table>

#### DISCUSSION

### SCIENTIFIC SESSION 9
9:05AM – 10:15AM
Needham’s Ballroom
CHAIRPERSON: Dr. Marilyn Lawrence-Wright

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>9:10</td>
<td>Franklyn Colon Arias</td>
<td>High Glucose Level Associated to a Poor Prognosis in Patients With ST Segment Elevation Myocardial Infarction Treated With Thrombolysis Reperfusion Therapy</td>
</tr>
<tr>
<td>9:20</td>
<td>Jagadeswara Rao Earla</td>
<td>Pattern of Antithrombotic Drug Usage in an Urban Caribbean Population - A Retrospective Study From the CAFÉ Database</td>
</tr>
</tbody>
</table>

#### DISCUSSION

### SCIENTIFIC SESSION 10
10:45AM – 12:00PM
Needham’s Ballroom
CHAIRPERSON: Dr. Pravinde Ramoutar

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:45</td>
<td>Dabor Resiere</td>
<td>Acute Beta Blocker Overdose Management: Factors Associated with Cardiovascular Mortality in a Caribbean Intensive Care Unit</td>
</tr>
<tr>
<td>10:55</td>
<td>Monica Mukherjee</td>
<td>Right Heart Dysfunction in Heart Failure with Preserved Ejection Fraction and Worsening Renal Function Johns Hopkins Medicine Sponsored Lecture</td>
</tr>
</tbody>
</table>

#### DISCUSSION
<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>11:25 – 11:55</td>
<td>Brijeshwar Maini</td>
<td>New Developments In Structural Heart Diseases</td>
</tr>
<tr>
<td></td>
<td>USA</td>
<td>Tenet Healthcare Sponsored Lecture</td>
</tr>
<tr>
<td>11:55 – 12:00</td>
<td></td>
<td>DISCUSSION</td>
</tr>
</tbody>
</table>

**LUNCH BREAK - VIEWING OF EXHIBITS**

*CCS 2016 Schedule at a Glance Draft*

**12:00PM – 1:00PM**

**SCIENTIFIC SESSION 11**

*1:00PM – 2:00PM*

Needham’s Ballroom

**CHAIRPERSON: Dr. Mercedes Dullum**

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>1:00 – 1:10</td>
<td>Legena Henry</td>
<td>Using Haemodynamics to Determine the Trustworthiness of a Patient's Echocardiogram Reading for Mitral Regurgitation</td>
</tr>
<tr>
<td></td>
<td><em>Trinidad and Tobago</em></td>
<td></td>
</tr>
<tr>
<td>1:10 – 1:20</td>
<td>Nathalie Ozier-Lafontaine</td>
<td>Left Ventricular Hypertrophy and First-Month Fatality in Stroke: Insight from the Ermancia II Cohort</td>
</tr>
<tr>
<td></td>
<td><em>Martinique</em></td>
<td></td>
</tr>
<tr>
<td>1:20 – 1:30</td>
<td></td>
<td>DISCUSSION</td>
</tr>
<tr>
<td>1:30 – 1:40</td>
<td>Samuel Zorrilla Bautista</td>
<td>Post-Surgical Multidisciplinary Management of Ascending Aortic Repair</td>
</tr>
<tr>
<td></td>
<td><em>Dominican Republic</em></td>
<td></td>
</tr>
<tr>
<td>1:40 – 1:50</td>
<td>Alan Smith</td>
<td>Cardiac Stab Wounds: A Case Series</td>
</tr>
<tr>
<td></td>
<td><em>Barbados</em></td>
<td></td>
</tr>
<tr>
<td>1:50 – 2:00</td>
<td></td>
<td>DISCUSSION</td>
</tr>
</tbody>
</table>

**SCIENTIFIC SESSION 12**

*2:00PM – 3:00PM*

Needham’s Ballroom

**CHAIRPERSON: Dr. Roy Tilluckdharry**

<table>
<thead>
<tr>
<th>Time</th>
<th>Speaker</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>2:00 – 2:10</td>
<td>Marcus St. John</td>
<td>Contemporary Management of Severe Aortic Stenosis</td>
</tr>
<tr>
<td></td>
<td><em>USA</em></td>
<td></td>
</tr>
<tr>
<td>2:10 – 2:20</td>
<td>Sharad Jaitly</td>
<td>&quot;Myocardial Viability: Where Do We Stand in 2016&quot; Assessment</td>
</tr>
<tr>
<td></td>
<td><em>USA</em></td>
<td></td>
</tr>
<tr>
<td>2:20 – 2:30</td>
<td>Sharath Babu</td>
<td>Cardiac MRI in Pericardial Diseases</td>
</tr>
<tr>
<td></td>
<td><em>Cayman Islands</em></td>
<td></td>
</tr>
<tr>
<td>2:30 – 2:40</td>
<td></td>
<td>DISCUSSION</td>
</tr>
<tr>
<td>2:40 – 3:00</td>
<td></td>
<td>CLOSING REMARKS</td>
</tr>
</tbody>
</table>
32nd Caribbean Cardiology Conference

Port of Spain, Trinidad

July 19-22, 2017

Abstract Submission Opens - October 3, 2016
Early-Bird Registration Opens - February 1, 2017

EDUCATE
INFORM
UPDATE

www.caribbeancardiac.org | secretariat@caribbeancardiac.org
Title: Evolution of Cardiac Implants in a Resource Poor Setting – "Damned If You Do, Damned If You Don't"

Author(s): Benjamin, A.; Daniel, J.R.; Didier, M.

Aim: This study was performed with two (2) main objectives. Firstly, to highlight the progression of pacemaker implantations from temporary pacing without imaging to permanent cardiac pacing with an image intensifier.

Secondly, to compare from an observational perspective the frequencies of device type, indication for implantation and increasing age of implantations with the trends documented in International settings.

Methods: We conducted a retrospective observational study from hospital records of patients presented to, and referred to Tapion Hospital St. Lucia which is the only pacemaker implantation institution on the island. There were a total of 76 patients for which data was available, and the study period was from November 2007 to February 2016. Data was collected on a specially designed data collection sheet which included patient demographics, indication for implant and type of implant. We then proceeded to draw graphical comparisons utilizing all of data assimilated, namely: 1. Age vs Type of Implant and vs Indication for Implant, 2. Sex vs Type of Implant and vs Indication for Implant, 3. Age vs Sex.

Results: We found from our study population that:
1. Females received device implantations at an average of 10 years earlier than males.
2. The most common indications for implantation were Sinus Node Dysfunction and High Grade symptomatic Atrioventricular block accounting for 57% of the total indications.
3. Dual chambers were implanted with a higher incidence than any other implantable device accounting for 45% of all devices implanted.

Our findings were consistent with international findings from a retrospective study from the (National Hospitals Discharge Survey- on the reasons for escalating Pacemaker implants-American Journal of Cardiology, 2006;98(1):93), which demonstrated; Firstly, age-adjusted implantation rates increased progressively over the past 15 years, Second, it was found that the escalating implantation rate is attributable to increasing implantation for isolated sinus node dysfunction (SND). Implantation for SND increased significantly over the study period (by 102%), whereas implantation for all other indications did not. The third major finding of this study is that there has been a progressive relative and absolute increase in the dual-chamber implantation rate. In 2002, 82.8% of all initial pacemaker implantations were dual-chamber devices.

It is noteworthy that of the 76 patients’ data collected, in terms of complications, there were no wound infections, no lead displacements, no hematomas requiring drainage and only one pneumothorax documented.

Conclusion: Pacemaker implantation in our resource limited setting demonstrated trends similar to those of sufficient settings internationally. The complication rate was minimal, and now that we have documented a baseline we can continue to monitor rates of change of incidences and prevalence in guiding future management of pacemaker implantations.

Title: The Diagnostic Yield of Tilt-Table Testing in Trinidad and Tobago

Author(s): Boodhoo, L.; Dubay, S.; Nanan, S.

Introduction: Syncope is a common clinical condition and tilt-table testing (Ttt) has a major role in its evaluation. Despite this, Ttt is underutilised with only one centre in Trinidad having this capability. The aim of this study was to determine the diagnostic yield of patients undergoing Ttt at an electrophysiologist-led syncope clinic.

Methods: Retrospective case note review was performed. Ttt protocol involved tilting to 70 degrees, a passive unmedicated phase of 10 minutes, application of sublingual nitroglycerine and an additional 10 minutes of standing.

Results: 64 patients underwent Ttt between 2011-2016. 71% were female, mean age 48 ± 21 years. Presentation was syncope in 30 (47%) and dizziness in 21 (33%). Mean number of previous investigations was 3.6, which included labs, ECG, echocardiogram and Holter.

A positive diagnosis was made on Ttt in 40 (63%) patients; Reflex syncope (vasovagal syndrome, carotid sinus syndrome) in 25 (39%), orthostasis in 14 (22%) and cardiac (brady or tachyarrhythmia) in 1 (2%).

16 (27%) of patients had undergone CT or MRI, 7 (12%) electroencephalogram (EEG), 1 (1%) cardiac catheterization and 1 (1%) electrophysiology studies, none of which were diagnostic.

Conclusion: Tilt-table testing has a high diagnostic yield in the evaluation of syncope. Increased utilization will enable
improved evaluation and management of affected patients.

**Title:** Cardiovascular Clinical Trials 2015 Year in Review  
**Author(s):** Giugliano, G.R.; Giugliano, R.P.

Each year important advances in cardiovascular medicine are presented at the various major scientific sessions held throughout the world. However, the demands of clinical practice often make attendance at these meetings challenging. Subsequent delays between the live presentation and publication in the literature leaves practitioners without a reliable tool for integrating new knowledge into their practice.

We will present peer-reviewed highlights of the most important cardiovascular clinical trials presented within the past year at major scientific sessions (ESC 2015, TCT 2015, AHA 2015, and ACC 2016). These data will cover a broad range of cardiovascular topics from heart failure to cardiac interventions. Our goal is to bring the busy clinician up to speed with the latest developments in clinical cardiovascular studies of the past year.

**Title:** Patterns of Diagnostic Evaluation in Suspected Syncope  
**Author(s):** Zorrilla, S.; Vidal, F.; Nunez, E.; Defillo, F.; Herrera, C.

Introduction: Syncope is a multifactorial, commonly poorly addressed condition, in part possibly due to lack of systematic utilization of testing. A definitive mechanistic diagnosis remains a challenge.

Objective: To analyse patterns of diagnostic evaluations suspected syncope patients referred to the Syncope Unit to perform a tilt table test.

Methods: Our institution was recently reorganized exclusively as a CV care centre with a full time electrophysiology programme and a structured Syncope Unit. Patients referred to perform tilt table testing with proven or suspected syncope were included in this analysis. Referral source, test results/ costs were analysed.

Results: From July 2014 to March 2016, 156 patients were seen: 80% referred by neuroscientists and 20% by cardiologists. Mean age 38 (range 11 – 92) years; 57% women. Cardiovascular risk factors: Hypertension 24%, Diabetes 4%, Dyslipidaemia 15%, Tobacco use 13%, Family history of Sudden Death 2.5%, Structural heart disease in 2.5%. At least 75% of patients reported visiting the emergency room previously. Neurally mediated syncope was confirmed in 104 (66%) subjects. Of the 156 tilt tests performed, 92 (59%) were positive, including 20 (22%) subjects who retrospectively never had a true syncope; 39% of tilts were negative and 2% consistent with POTS Syndrome. Cost of testing varied between cardiologist’s average 165USD per patient, and neuroscientist’s average 322USD per patient. Diagnostic confirmation of 70% and 67% respectively.

Conclusion: Syncope in our experience, is usually not systematically approached, leading to excessive cost and delayed diagnosis, mostly by neuroscientists’ initial approach. These data favour an integrated cardiology oriented strategy.

**Title:** Diagnostic Value of Implantable Loop Recorder in Patients with Recurring Syncope of Unknown Cause  
**Author(s):** Garillo, R.; Maid, G.; Fernández, G.; Llorente Rivadeneira, J.E.; Belziti, C.

Objective: Implantable loop recorder (ILR) is indicated in the study of recurrent syncope of unknown origin. The purpose of the study was to determine the diagnostic usefulness of ILR in our population.

Materials and Methods: 56 patients (p) were included consecutively with recurrent episodes of syncope of unknown cause after additional studies performed in the evaluation of syncope (interrogation, physical examination, carotid massage, telemetry ECG, blood tests, echocardiography doppler, HOLTER, tilt test, electrophysiological study). All patients were followed with ILR controls every 6 months or in the presence of a syncope event to the extraction due to battery exhaustion. The average follow-up was 15.06 months (± 5.45 months).

Results: From July 2014 to March 2016, 156 patients were seen: 80% referred by neuroscientists and 20% by cardiologists. Mean age 38 (range 11 – 92) years; 57% women. Cardiovascular risk factors: Hypertension 24%, Diabetes 4%, Dyslipidaemia 15%, Tobacco use 13%, Family history of Sudden Death 2.5%, Structural heart disease in 2.5%. At least 75% of patients reported visiting the emergency room previously. Neurally mediated syncope was confirmed in 104 (66%) subjects. Of the 156 tilt tests performed, 92 (59%) were positive, including 20 (22%) subjects who retrospectively never had a true syncope; 39% of tilts were negative and 2% consistent with POTS Syndrome. Cost of testing varied between cardiologist’s average 165USD per patient, and neuroscientist’s average 322USD per patient. Diagnostic confirmation of 70% and 67% respectively.

Conclusion: Syncope in our experience, is usually not systematically approached, leading to excessive cost and delayed diagnosis, mostly by neuroscientists’ initial approach. These data favour an integrated cardiology oriented strategy.
1. The ILR served to establish diagnosis of arrhythmic syncope or discard in 32 of 56 implanted patients (57.1%) who had a history of syncope of unknown cause. Most syncope episodes due to rhythm alteration (82.4%), were associated with a history of atrial arrhythmias, conduction disturbances or evidence of sinus node dysfunction.

2. In a significantly high proportion (46.8%) syncope episodes were not related to arrhythmias or conduction disorders.

3. In no case fast ventricular arrhythmias were responsible for syncope.

Title: Expanding Left Ventricular Assist Device Therapy in the Caribbean for Treatment of Advanced Heart Failure
Author(s): Camacho, M.T.; Dullum, M.K.C.; Bither, C.

Heart failure affects millions of patients and continues to be a leading driver of mortality worldwide. PAHO states “The Caribbean epidemic of chronic non-communicable diseases (NCDs) – principally, cardiovascular disease is the worst in the region of the Americas, causing premature loss of life, lost productivity and spiralling health care costs”. Hypertensive heart disease (HHD) followed by ischemic heart disease (IHD) has been shown to be the most common etiologies of heart failure in Jamaica.

Treatment for patients with advanced heart failure includes initially optimal medical management (OMM) to improve function of the failing heart. Implantable cardioverter defibrillators (ICD) and cardiac resynchronization therapy (CRT) may also benefit select patients whose symptoms continue to progress. Even with these treatments, millions of patients progress to NYHA Class III or Class IV, experiencing a dramatic reduction in quality of life and death. Cardiac transplantation is limited by the availability of donor hearts. Thousands of eligible patients face an extended waiting period, high mortality rates or diminished functional capacity. Other patients are not candidates for transplantation.

Left Ventricular Devices (LVADs) improve functional capacity, quality of life and longevity inpatients with medically refractory heart failure. A successful LVAD implant center requires extensive resources, staff and expertise, which would be a large financial burden on smaller hospitals and centers.

Sharing patient care allows patients with advanced heart failure to receive lifesaving VAD treatment and live in their own home in the Caribbean managed by their local Cardiologist. Sharing care enables the Cardiologist in the Caribbean to have hands on care of their own patients.

Title: Epidemiological and Hemodynamic Features of Pulmonary Hypertension in the Caribbean

Introduction: Pulmonary Hypertension (PH) remains a rare disease, and its epidemiological and clinical characteristics have never been described in Afro-Caribbean populations.

Objective: To describe the demographic, clinical, and hemodynamic characteristics of patients with PH in Martinique, and to compare them with those of the French Cohort.

Methods: We conducted a retrospective study of all the adult patients referred for PH in our Centre of Rare Diseases in the University Hospital of Martinique from January 2007 to November 2015.

Results: During this 9 year-period, 107 patients were diagnosed with pulmonary hypertension. Sixty-three of them had a pulmonary artery hypertension (group 1 PH). Most of them (97%) were Afro-Caribbean. Most of them were also women. Mean age at diagnosis was 56 years, and 71% of the patients were in III-IV WHO functional class. Mean pulmonary artery pressure and cardiac index at right heart catheterism were 43 mmHg and 2.7 L/min/m², respectively. The most frequent causes were idiopathic pulmonary hypertension (28.8%), pulmonary artery hypertension associated with connective disease (16.7%), and congenital cardiac diseases. The estimated prevalence was 113 per million inhabitants, 7.5 times higher than the prevalence measured in continental France. One-year survival was 84.1%. Compared to the French overall cohort, our patients were more likely to be women (sex-ratio 3.9 versus 1.9, p = 0.005) and to be aged more than 70 years at diagnosis (33.3% vs. 9.1%, p < 0.001). As for the causes, the frequency of connective tissue-associated pulmonary hypertension was higher albeit non-significantly (22.7% versus 15.3%, p = 0.07) was observed.

Conclusion: This first study of the epidemiological characteristics of pulmonary hypertension in an Afro-Caribbean region differs from the French Cohort with a higher prevalence, a diagnosis more often at later stages of life, and a higher frequency of connective tissue disorders.

Title: Advanced Heart Failure Therapy: The LVAD Revolution
Author(s): Galindez, N.I.

End stage heart failure is a serious worldwide problem with significant costs to healthcare systems. The goal-standard
therapy remains cardiac transplantation, however donor availability is limited. Mechanical circulatory support, specifically, durable ventricular assist devices, has emerged as a therapy to bridge patients to transplantation or for destination therapy. The major impact of this technology as it continues to evolve is on patient survival, quality of life, and functional capacity.

Title: "CARDIOMEMS" A Novel Device to Reduce Heart Failure Admissions
Author(s): Smithson, S.; Coy, K.
Heart failure represents a significant healthcare issue with tremendous cost to society. A number of advances have led to improved outcomes, but recurrent hospitalizations are still commonplace.

Recently the Champion Study results showed implantable pressure sensors from St. Jude Medical, "CARDIOMEMS", led to reduced hospitalizations in patients with left ventricular dysfunction. Furthermore, in patients with preserved ejection fraction and heart failure, a difficult patient subset, the findings were more dramatic. I present our experience with this technology over the past six months. We have implanted 25 devices with no complications and 100% success. Our technical support staff monitor patients on a daily basis and software allows alerts to identify patients who have reached threshold values.

Our experience mirrors that of the Champion Study. Patient satisfaction is high and compliance with sodium and dietary factors increased.

In summary, this device improves the outpatient management of our heart failure patients and replaces costly hospitalizations.

Title: A "Stand Alone" Cardiac Catheterisation Laboratory in a Small Island Community.
Author(s): Ishmael, R.; Ettedgui, J.; Henry, R.; Massay, R.J.
The cardiac catheterisation laboratory is the "heart" of a cardiology department and a well-equipped functional one is a necessity if "high end" cardiology is to be practised. It is the "gold standard" for the diagnosis of coronary artery disease and still used extensively for the diagnosis of congenital (CHD) and valvar (VHD) heart disease. The recent explosion in interventional cardiology, as well as EP studies and ablations along with pacemaker and defibrillator implantations and cardiac resynchronisation therapy make access to an adequately functioning cath lab mandatory. We present our experience in developing a "stand alone" cardiac catheterisation laboratory in a private office setting when the catheterisation lab in the public hospital became non-functional.

During the period June 2006 to March 2016, 665 patients underwent diagnostic cardiac catheterisation, 647 for suspected CAD, 10 for VHD, 4 for CHD and 3 for dilated cardiomyopathies. One patient had a stab wound to the heart with an apical VSD. Of these, 84 have been referred for PCI and 81 for cardiac surgery.

Thirty-nine patients have had interventional procedures in the lab, 20 had PCI’s and 19 had CHD procedures. Eighty-nine patients have had pacemakers, 2 had AICD’s implanted and 5 had cardiac resynchronisation therapy in the lab.

There were no deaths and minimal morbidity.

Out of necessity, a cardiac catheterisation laboratory has been successfully set up in a private "stand alone" clinic setting to serve the needs of a small island community.

THURSDAY JULY 28

Title: Interventional Therapies in Stroke Prevention: Watchman and PFO Closure
Author(s): Cubeddu, R.J.
Novel transcatheter stroke prevention therapies have recently emerged in an effort to decrease what is still today the 3rd leading cause of death and 1st cause of serious disability. The increasing body of literature suggests that in the appropriately selected patients these unique interventional therapies may be of great alternative benefit.

This talk will summarize the unique facts, benefits, and limitations that define the role of Watchman and PFO closure in current clinical practice.

Title: Transcatheter Closure of Patent Foramen Ovale in Adults Using an Amplatzer Atrial Septal Ocluder
Author(s): Ettedgui, J.; Greeley, E.; English, R.F.
There is growing evidence to support transcatheter closure of patent foramen ovale in adults with cryptogenic stroke. This study evaluates the efficacy of the Amplatzer Atrial Septal Occluder for closure of patent foramen ovale in these patients. Over a 10 year period from January 2006 to December 2015, 109 adults (60 women) with history of a transient
neurologic event, underwent cardiac catheterization for device closure of a patent foramen ovale with an Amplatzer/ St. Jude Medical Atrial Septal Occluder. The age range was 19 – 81 years (median 49). All patients had a positive bubble study on echocardiography. There was procedural success in 106 patients; a tunnel like communication could not be crossed in one and the atrial septum was found to be intact in two others. Device diameter ranged from 5mm to 20mm (median 10). There was one device embolization, but no other acute complications. Follow-up was available in 103 of the 106 patients who underwent placement of a device. All of them had transthoracic echocardiography with a bubble study a median of 1 month post device implant (range 1 – 6 months). There was a positive bubble study in one patient who subsequently underwent placement of a second device. There was trace residual shunting in 4, and the bubble study was negative in the remaining 98. There were no late arrhythmias, device embolizations or erosions.

In conclusion, transcatheter closure of a patent foramen ovale can be achieved effectively in adults with history of cryptogenic stroke using an Amplatzer Atrial Septal Occluder.

Title: Our Experience: 42 Haitian Children with Heart Disease Treated at Health City
Author(s): Upadhya, S.; Chattuparambil, B.; Modi, S.; Robinson, O.
Congenital Heart disease (CHD) is the most common birth defect and occurs at a rate of 6-8 per 1000 live births. Haiti is a third world country and doesn't have the full capacity to treat majority of the congenital heart disease. We present our experience in the last year and a half of diagnosis and treatment of Haitian children with congenital heart disease in alliance with not for profit organizations Haiti Cardiac Alliance and Have a Heart Cayman. Till February 2016, we have treated 42 Haitian kids with CHD at Health City Cayman Islands (HCCI).

The first screening at Mirabele and Port Au Prince was done in June 2014. Around 100 kids were screened for CHD and 30 were identified for treatment at Health City Cayman Islands. The first batch of four kids came to Health City in the month of October 2014. From then on, both simple and complex CHDs were treated either by Open Heart Surgery or Transcutaneous Intervention in the catheterization laboratory at regular intervals. We did the second screening program of around 300 kids at Mirabele in June 2015, and identified 100 potential cases for treatment. Total of 15 interventions and 27 surgeries were performed, with the majority being septal defects, Tetralogy of Fallot and Isolated pulmonary stenosis.

There were no in-hospital mortality and one morbidity in the form of stroke. The follow-up assessment were done by visiting paediatric cardiologists at Haiti and most of the children have recovered well with good weight gain and are free of symptoms. Our intention is to continue and intensify the programme so that we treat 300 kids with CHD a year.

Title: Interrupted Like Coarctation Aortic Arch Done Percutaneously: Case Presentation Pediatric Cardiology
Author(s): Rosario, C.; Vasquez, A.; Mendez, G.; Baez, A.; Osorio, J.; Toribio, Y.
Introduction: Coarctation of the aorta is a common and highly significant clinical entity that decreases life expectancy. It has important clinical, social and employment impact on the life of the patient with or without treatment.

Case Presentation: A 14 y/o male was referred to our center for Systemic Hypertension (HA). Patient was on atenolol 50 mg. Physical exam showed BP of RA: 197/113 mmHg, LA: 196/112 mmHg, RL: 119/87 mmHg and LL: 120/83 mmHg with absent peripheral pulses in LE. EKG revealed LVH and Roesler sign was present on Chest films.

Additional Imaging: Echocardiography: no gradient in DA
Angio TAC: - Multiple large collaterals
- Pre-coarctation area of 0.1 cm making it an interrupted like coarctation

Cath: BP pre ballooning at ascending aorta was 165/102 mmHg. Due to narrowness of the segment we were unable to pass coarctation using the femoral path way (retrograde), therefore a radial pathway approach was used which revealed an aortic arch of 1.2 cm, a pre-coarctation area of 1.18 cm, a coarctation of 0.3 cm and a post coarctation of 1.5 cm. A Mounted CP Stent on a 12mm by 3.4 cm of length BIB Catheter was used and post dilatation gradient was 5mmHg.

Conclusion: Interventional cardiology, in its relentless advance, is trying to replace the surgical solution with a less aggressive procedure and lesser surgical complications. Using an endovascular approach, we can offer a solution to problems that at first sight seemed exclusively surgical.

Post ballooning
Title: "Hybrid" Management of Malignant Ventricular Arrhythmias in a 16-Month Old Trinidadian with Left Ventricular Noncompaction Cardiomyopathy

Author(s): Bryant, R.M.; Redfearn, S.P.; Ho, J.G.; Benjamin, S.; Lacey, S.R.; Shillingford, M.S.

Left ventricular noncompaction cardiomyopathy (LVNC) is caused by an arrest of the normal process of endomyocardial morphogenesis, producing a spongy meshwork of fibres and intertrabecular recesses that link the myocardium with the left ventricular cavity. It has been associated with cyanotic and acyanotic congenital heart disease, coronary anomalies, and arrhythmias.

We review the management of malignant ventricular arrhythmias in a 16-month old Trinidadian girl who presented with ventricular fibrillation (VF). Her course was complicated by recurrent complex arrhythmias (polymorphic ventricular tachycardia, VF, and cardiac arrest) requiring prolonged resuscitations and multiple cardioversions that resulted in cerebral infarcts, deep vein thromboses, renal insufficiency, hepatic insufficiency, gastroparesis, and prolonged ventilation. She was transported to Wolfson Children’s Hospital in Jacksonville, FL, for assistance with these complex issues. A transesophageal echocardiogram confirmed the presence of LVNC. "Hybrid" management of her malignant arrhythmias included intravenous amiodarone and dexmedetomidine, oral flecainide, transcatheter ablation of a recalcitrant fascicular ventricular tachycardia and implantation of an epicardial ICD system. Through the use of a global satellite monitoring system, arrhythmia control is being constantly monitored.

Extensive LVNC can produce malignant life-threatening arrhythmias. However, through the use of a "hybrid" approach, arrhythmia management has been achieved and this toddler has been able to resume a normal lifestyle.

Title: Sudden Death in Children and Young Adults: What can we do

Author(s): Decker, J.A.

Sudden cardiac death is a rare occurrence in children and young adults. However, the impact to the families and communities affected are tremendous. It typically occurs in seemingly healthy individuals, adding to the tragedy. This makes identifying individuals who may be at risk for such events challenging. Understanding the diseases that lead to sudden death and symptoms that may help identify them early are key. The most common causes of sudden death are due to cardiomyopathies, particularly hypertrophic cardiomyopathy, but also dilated cardiomyopathies and arrhythmogenic right ventricular cardiomyopathy can lead to sudden death due to lethal ventricular arrhythmias. Congenital coronary anomalies and channelopathies, such as Long QT Syndrome, Brugada Syndrome, and catecholaminergic polymorphic ventricular tachycardia, may present with sudden death as the first symptom. A thorough history and physical may help with prevention, but automated external defibrillators are important tools to minimize the devastating consequences of sudden death in children and young adults.

Title: Interventional Cardiology for Congenital Heart Disease (CHD) - Experience at Bracebridge Medical Centre (BMC) in Barbados

Author(s): Ishmael, R.; Ettdguie, J.; Greeley, E.; Fakoory, M.; Boyea, K.

Interventional procedures for the treatment of CHD have become the standard of care for the treatment of multiple types of CHD. Good outcomes require a multidisciplinary team approach with paediatric cardiologists, interventional cardiologists, anaesthesiologists and nurses skilled in the care of children working together in an equipped cardiac catheterisation laboratory.

Between July 2009 and December 2015, 20 congenital heart patients underwent cardiac catheterization at Bracebridge Medical Centre in partnership with the UF Health Pediatric Cardiovascular Center at Wolfson Children’s Hospital in Jacksonville, FL. A successful intervention was completed in 19. One patient had a patent ductus that was too small to close. Ages ranged from 3 to 65 years and there were 15 females. Ten patients had ASD device closures (Amplatzer Septal Occluder; 6 using transthoracic echocardiography and 4 transesophageal echocardiography for guidance). Six had PDA closures (Amplatzer Duct Occluder) and 3 had balloon pulmonary valvotomy. All procedures were performed under general anaesthesia or moderate sedation.

There was no mortality and minimal morbidity. All patients were treated with aspirin and clopidogrel for one month and then with aspirin alone for another 5 months with repeat echocardiography at 6 and 12 months post-procedure. There have been no short or long term complications.

Interventional procedures for CHD can be performed safely and successfully in a standalone cath lab through a partnership between the private sector in Barbados and an established congenital heart programme in the US.

Bibliography

Title: Congenital Heart Surgery in the Caribbean: Ten Year Experience at Wolfson Children’s Hospital
Author(s): Ettedgui, J.; Shillingford, M.; Greeley, E.; Ishmael, R.; Ceithaml, E.

Treatment for children with congenital heart disease is expensive and not readily available throughout the Eastern Caribbean. For the past 10 years, Wolfson Children’s Hospital has been heavily involved in providing cardiac care for patients with congenital heart disease from this region through its charitable programme (Patrons of the Hearts) as well as through direct arrangements with the healthcare systems in Barbados and Trinidad. From January 1, 2006, to December 31, 2015, a total of 149 children and young adults from the region have received care in Jacksonville. Thirty-six of these children were through Patrons of the Hearts, 105 were through direct arrangements and 4 were private patients. Age range was 1 week to 32 years, with a median age of 3 years. There were 70 children from Trinidad, 45 from Barbados, 24 from Grenada, 7 from Antigua, 2 from Dominica, and 1 from St. Kitts. There were 117 open heart procedures, 14 closed heart procedures, 12 transcatheter interventional procedures, and 6 electrophysiology procedures. There were 4 surgical deaths with an operative mortality of 3%; 3 in children with genetic syndromes and one on a child with a single ventricle who died from aspiration.

Partnerships between established congenital heart programmes such as the one at Wolfson Children’s Hospital, governmental healthcare systems and charitable organizations like Patrons of the Hearts can facilitate high quality care with excellent outcomes. Further expansion of these programmes would provide lifesaving treatment to even more children with congenital heart disease from the Eastern Caribbean.

Title: Critical Congenital Heart Disease among Neonates Detected in the First Few Days of Life in Barbados: Prevalence, Pattern and Outcome
Author(s): Kumar, A.; Singh, K.; Benskin, G.; Ishmael, R.G.; Krishnamurthy, K.
Objective: to study the prevalence, pattern and outcome of critical congenital heart disease detected during the first few days of life.

Methods: A retrospective clinical audit of all the babies admitted to the neonatal intensive care unit at the Queen Elizabeth Hospital with a critical congenital heart disease as one of the diagnosis. The period of study extends from January 1993 through December 2012. Data on the total live births, total neonatal admissions and deaths were also collected for the corresponding period.

Results: The overall prevalence rate for the CCHD in this population was 14 per 10,000 live births. The prevalence rate increased from 12 per 10,000 live births during the 1993-2002 to 16 per 10,000 live births during the 2003-2012 period. Overall 85% of all CCHD presented as an isolated disease. Transposition of great vessels (7.8%) and the hypoplastic left heart syndrome (7.8%) were the two most common isolated critical heart disease detected during the first few days of life. CCHD contributed to the 0.78% (95% CI 61%, 94%) of all (11842) admissions to the NICU during the ten year study period. The average duration of NICU stay was 22 days among the term babies and 38 days among the preterm babies. CCHD accounted for 4.1% of all neonatal deaths (617 neonatal deaths). The case fatality rate for the CCHD was 27.8%.

Conclusions: CCHD in this setting carries a high case fatality rate and contributes significantly to the overall neonatal morbidity and mortality.

Figure 1. Trend in the prevalence of Critical congenital heart disease in Barbados, 1993-2012.
Table 1. Pattern of critical congenital heart disease among neonates in Barbados, 1993 - 2012.

<table>
<thead>
<tr>
<th>Pattern of congenital heart disease</th>
<th>No. (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISOLATED CHD</td>
<td>77</td>
</tr>
<tr>
<td>Isolated AV Canal defect</td>
<td>4</td>
</tr>
<tr>
<td>Congenital Heart Block</td>
<td>6</td>
</tr>
<tr>
<td>Transposition of great vessels</td>
<td>11</td>
</tr>
<tr>
<td>Tricuspid atresia</td>
<td>5</td>
</tr>
<tr>
<td>Pulmonary atresia</td>
<td>4</td>
</tr>
<tr>
<td>Hypoplastic left heart syndrome</td>
<td>7</td>
</tr>
<tr>
<td>Hypoplastic right heart syndrome</td>
<td>2</td>
</tr>
<tr>
<td>Tetralogy of Fallot</td>
<td>5</td>
</tr>
<tr>
<td>Complex CHD</td>
<td>13</td>
</tr>
<tr>
<td>VSD</td>
<td>11</td>
</tr>
<tr>
<td>Dilated cardiomyopathy</td>
<td>3</td>
</tr>
<tr>
<td>PDA (not of prematurity)</td>
<td>4</td>
</tr>
<tr>
<td>Others</td>
<td>2</td>
</tr>
<tr>
<td>CHROMOSOMAL ANOMALY AND CHD</td>
<td>10</td>
</tr>
<tr>
<td>AV Canal malformation</td>
<td>4</td>
</tr>
<tr>
<td>Tetralogy of Fallot</td>
<td>2</td>
</tr>
<tr>
<td>VSD</td>
<td>2</td>
</tr>
<tr>
<td>Complex CHD</td>
<td>2</td>
</tr>
<tr>
<td>MULTIPLE MCM WITH CHD</td>
<td>4</td>
</tr>
<tr>
<td>CHARGE syndrome</td>
<td>1</td>
</tr>
<tr>
<td>Skeletal dysplasia, Dysmorphic facie, Cleft lip, PDA</td>
<td>1</td>
</tr>
<tr>
<td>Microcephaly, Dysmorphic facie, VSD</td>
<td>1</td>
</tr>
<tr>
<td>Diaphragmatic hernia, skeletal dysplasia, PDA</td>
<td>1</td>
</tr>
</tbody>
</table>

Title: Traumatic Aortic Valve Cusp Rupture – A Rare Clinical Entity
Introduction: Perforation of the coronary cusp of the aortic valve after blunt chest trauma is a rare and potentially fatal lesion that can be easily missed.

Case presentation: A forty-one year old policeman in a motorcade sustained multiple injuries following a motor vehicle accident and was referred to hospital with multiple fractures and was found to have a loud holodiastolic murmur and
wide pulse pressure on auscultation. Urgent transesophageal and transthoracic echocardiogram confirmed moderate to severe aortic insufficiency arising from traumatic rupture of the non-coronary cusp of the aortic valve. Timely replacement with an aortic valve mechanical prosthesis resulted in good overall recovery of the patient’s condition.

Conclusion: Traumatic rupture of the coronary cusp of the aortic valve is a rare but clinically significant cause of severe aortic regurgitation necessitating urgent surgical intervention. Prompt diagnosis and timing of surgical intervention is of paramount importance in preventing undue mortality and morbidity in survivors of blunt cardiac chest trauma. The authors discuss the incidence, clinical presentation, and management, with a review of the literature of this rare but potentially deadly phenomena.

Title: ON-X Prosthetic Aortic Valve Replacement in the Young: Safety of Limited Anticoagulation Followed by Antiplatelet Therapy Alone
Author(s): Mariñez, Y.; Wyss, J.L.; Vargas, F.; Toribio, J.; Then, D.; Perez, R.; Baez, A.; Herrera, C.J.
Introduction: Valve replacement in the young remains a challenge. All prostheses have potential complications that make them only partial and/or temporary solutions. With newer generation devices such as the ON X prosthesis (Medical Carbon Research Institute, Austin, TX), a less intense anticoagulation approach has been permitted owing to their improved physiologic profile. We propose that limited anticoagulation followed by antiplatelet therapy alone may be a safe approach in the prophylaxis of thromboembolic complications in young patients with ON X valves.

Materials and Methods: Retrospective review of all valve replacements with an ON X prosthesis receiving short-term warfarin followed by antiplatelet therapy alone. Clinical, demographic, surgical and follow-up data was obtained from records and office visits.

Results: From April 2014 to June 2015, 11 subjects met inclusion criteria. Mean age 15 ±2 years, all in sinus rhythm preoperatively. Stenosis was present in 18%, regurgitation in 82%; 9% had rheumatic and the rest congenital valvular disease. Concomitant procedures included aortic annulus enlargement (18%) and ventricular septal defect closure (18%). Previous valve reconstruction had been done in 27%. All received warfarin for 3 months (mean INR 1.8 ± 0.25) and then continued only with Aspirin 81 mg/day. No stroke, transient ischemic attacks or other complications occurred after a mean follow-up of 20 ± 4 months.

Conclusions: In this group of young patients with ON X prosthetic replacement, thromboembolic prophylaxis with limited oral anticoagulation followed by antiplatelet therapy alone represented a safe alternative. Larger prospective studies will be needed to validate these promising results.

Title: Advanced Treatments in Atrial Fibrillation
Author(s): Maini, B.; Weisman, D.
The goal of this presentation is to inform and educate the practitioner about the most cutting edge advanced treatments in atrial fibrillation including:
- Advances in catheter ablation of atrial fibrillation
  - Fluoroless Atrial fibrillation ablation: Why using x-ray is no longer necessary. Hazards of long fluoroscopic procedures
  - The Convergent Procedure: Hybrid Afib ablation a team approach to treating the most difficult, longstanding, persistent Afib cases.

Title: Ablation vs Medical Therapy for Treatment of Atrial Fibrillation in Patients with Congestive Heart Failure (CHF) or Chronic Obstructive Pulmonary Disease (COPD) Directed from Emergency Department (ED) ED-AF Trial
Author(s): Hrachian, H.H.
Heart failure (HF) is one of the most common, costliest, and therefore closely monitored diagnoses within the hospital. HF affected approximately 5.1 million people within the United States, leading to $34B in direct and indirect expenses in 2008, and is expected to affect approximately 8 million people with $70B in direct and indirect expenses by 2030, within the United States.

According to the CDC, approximately 15 million Americans are diagnosed with Chronic Obstructive Pulmonary Disease (COPD). COPD is a comorbidity for HF, and approximately 33% of HF patients have concurrent COPD.

To exacerbate the economic effects of congestive heart failure (CHF) and COPD, CMS closely monitors the 30-day hospital readmission rate of CHF and COPD patients and compares this figure to neighbouring regional hospitals and national averages. When a particular hospital has comparably higher 30-day CHF readmission rates to the local and national averages, the hospital can potentially be penalized up to 3% of total Medicare reimbursement to the facility in 2016.
One consequential commonality between both of these diseases is the development of atrial fibrillation (AF). It is estimated that more than 20% of patients in heart failure have AF, and this figure can be as high as 48% depending on the study. Similarly, 40% of COPD patients either develop or have concurrent AF. In both diseases, regardless of the severity, it is commonly agreed upon that restoration of sinus rhythm leads to reduced symptoms and better prognosis.

Considering these facts, CHF and COPD patients represent a disproportionate financial and laborious burden to hospitals, and by managing and treating the AF subgroup, can represent a large savings (and earnings) for the hospital under current and future CMS programs.

Will patients who present to the Emergency Department (ED) with recurrent paroxysmal or persistent atrial fibrillation (AF) and a history of or current heart failure or COPD treated with percutaneous catheter ablation versus standard medical therapy have a decrease in 30 days’ readmissions, decreased mortality, improved quality of life, and reduce AF recurrence at 30 days, 6 months and 1 year?

Title: Surgery for Paroxysmal Atrial Fibrillation in the Setting of Mitral Valve Disease: A Role for Pulmonary Vein Isolation?

Author(s): Modi, S.; Chattuparambil, B.; Dhruva, K.; Modi, T.

Introduction and Objective: The Cox Maze procedure is widely performed for the surgical treatment of atrial fibrillation. However, it requires numerous incision lines and therefore is a time-consuming operation. We report a simplified operation for chronic atrial fibrillation associated with mitral valve disease. Our objective is to assess the efficacy of surgical isolation of the pulmonary veins for re-establishing sinus rhythm in patients with atrial fibrillation secondary to mitral valve disease.

Methods: From February 2014 to February 2016, Pulmonary vein isolation procedure was performed on 3 patients (male 2, female 1) for atrial fibrillation and indication for surgical correction of the mitral valve. Their mean age was 56.3 ±10 years, preoperative NYHA functional class was 2.2 ±0.6, left atrial size was 5.0 ±0.9 cm, and ejection fraction was 61.3 ±13%.

Results: All patients returned to sinus rhythm (100%) immediate postoperatively. Mean follow-up time was 18 months. Left atrial contraction was detected in all cases by trans-esophageal echo. None of the patients died postoperatively. None of the patients required a DDD pacemaker implant for sick sinus syndrome or electrical cardioversion in the postoperative period. All patients had sinus rhythm in the last medical visit.

Conclusion: Compared with the Maze procedure, this operation is less invasive, and safe. Despite the small number of patients in this study, we believe that the pulmonary vein isolation procedure may be an effective and simple procedure for paroxysmal atrial fibrillation associated with mitral valvular disease, particularly when it is of short duration and does not require additional instruments or specific training.

Title: Mitraclip: Who, What, When, Where and How?

Author(s): Cubeddu, R.

Mitraclip has evolved from randomized clinical trials to become the first FDA approved transcatheter therapy for the treatment of mitral valvular regurgitation. Evolving indications, ongoing clinical trials, and the increasing knowledge gained from the early commercial experience will ultimately dictate its future role in the management of valvular heart disease.

This talk will provide a comprehensive overview and practical approach to this novel transcatheter therapy.

Title: Retrospective Analysis of Clinical Features and Efficacy of Radiofrequency Ablation in Paediatric Patients with Supraventricular Arrhythmias Including Abnormal Pathways in a Tertiary Centre

Author(s): Perez Valerio, J.N.; Vidal, F.; Nuñez, E.; Hernandez, Y.; Herrera, C.

Introduction: Paroxysmal supraventricular tachycardia (PSVT), including accessory pathways (AP), represents the most common arrhythmias in paediatrics, conditioning the use of antiarrhythmic, with side effects and high recurrence. The best treatment option in these patients is radiofrequency ablation (RFA), given its safety and efficacy, often considered a first line treatment.

Objective: To analyse the clinical characteristics and effectiveness in paediatrics ARF undergoing ablation PSVT in our centre.
Methods: A retrospective analysis between April 2013 and November 2015, with a total of 55 patients with PSVT who underwent RFA, included 17 patients (30.9%) who were between 6 and 18 years old, average of 12.4 years old. Nodal Reentry (NRT) was confirmed in 5 patients (29%) and VA in 12 patients (71%). 65% of them were male. Ebstein Anomaly (EA) was documented in two cases.

Results: In patients with AP, the most frequent location was right sided in 10 patients (83%), 4 posterolateral (one Mahaim type), 3 posteroseptal, 2 parahissians, 2 lateral, 1 anterolateral, (1 patient had 3 abnormal pathways, EA). A left AP was located in 7 patients (17%), 1 was anterolateral and 1 lateral. In all cases, (TRN and AP), acute success was archived in 100%; we had a single recurrence. There were no complications. The energy source used was radio.

Conclusion: Considering the complexity of paediatric ARF, our series shows high acute success with low recurrence and no complications, indicating that it is an effective and safe procedure in this population.

Title: Brugada Syndrome: A Case Series Covering 13 Years of Experience
Author(s): Collins, K.; Massay, R.J.B.
The first case of Brugada syndrome seen in Barbados was presented at the Caribbean Cardiac Society meeting in 2003 in Curaçao. Follow up of this case, and nine others, shall be presented. Only one case had genetic studies done, and one a defibrillator. No deaths or cardiac arrests have occurred during the follow up period.

Our experience can be used as a pathway out of the conundrum of expensive follow up methods of this condition in a resource-scarce dominion.

Title: Non-Vitamin K Antagonist Oral Anticoagulants in Valvular Atrial Fibrillation: Current Data and What's on the Horizon
Author(s): Sancassani, R.
Non-Vitamin K antagonist oral anticoagulants (NOACs) have emerged as a more attractive alternative to warfarin in patients with atrial fibrillation. However, patients with valvular heart disease have mostly been excluded from major clinical trials. I will evaluate the current data on NOACs in patients with valvular heart disease and discuss potential options for their use in this patient population in the future.

Title: High Glucose Level Associated to a Poor Prognosis in Patients with ST Segment Elevation Myocardial Infarction Treated With Thrombolysis Reperfusion Therapy
Author(s): Colon Arias, F.A.; Monroy Gonzalez, A.; Ramirez Koelliker, R.E.; Pena Cabral, M.A.; Padilla Ibarra, J.; Piña, Y.
Background: High glucose level (HGL) can result in an exacerbation of a prothrombotic state. The aim of this study is to describe the success rate of thrombolysis reperfusion therapy (TRT), prognosis and complications in patients with ST-segment elevation myocardial infarction (STEMI) and HGL.

Methods: We retrospectively included 100 patients referred to our unit from January 2014 to January 2015, due to STEMI. TRT was performed in all patients. Survival curves were estimated by the Kaplan-Meier method and compared with the log-rank test. Association between glucose levels before thrombolysis and the 14-day mortality was assessed with Cox regression analysis.

Results: In our population, mean age was 57 ± 10 years, 86% were male, 42% were diabetic, 45% were hypertensive, 19% had dyslipidaemia, and 52% were active smokers. Ischemia time had a median of 160 minutes [44 min, 1065 max]. Kaplan-Meier survival curves showed that diabetic and non-diabetic patients with >140 mg/dl of glucose before TRT presented a worse prognosis than patients with =<140 mg/dl (p=0.029). Multivariate risk adjusted hazard ratio analysis showed that only patients with cardiogenic shock (CS) persisted with statistically significant increase of mortality at day 7 (HR=26; 2.9-227.4) (p<0.001). All patients with CS presented with >140 mg/dl of glucose. The 65.5% of patients that had >140 mg/dl of glucose, TRT failed.

Conclusion: In our population, HGL prior to TRT related to a worse prognosis 7 days after admission. However only CS remained a predictor of mortality.

Title: Pattern of Antithrombotic Drug Usage in an Urban Caribbean Population - A Retrospective Study from the CAFE Database
Author(s): Rao Earla, J.; Chanda, V.; Gundad, P.; Ebanks, I.; Kishore, R.
Background and Objective: Atrial fibrillation (AF) is the most common sustained arrhythmia and a major global health problem leading to complications like stroke which requires oral anticoagulant therapy (OAC). CAFE (Cayman Islands Atrial Fibrillation in Elderly Population) study is being carried out to learn the epidemiology of AF on the Island.
The current study proposes to analyse the usage pattern of Antithrombotics in AF patients in the CAFE study database.

Method: 577 patients were enrolled in Phase-I of the CAFE study. Of those, 64 patients were detected to have AF, 47 were previously diagnosed. The following data of patients were analysed: 1. CHA2DS2-VASc score, 2. Antithrombotic treatment, 3. Compliance with INR monitoring.

Results: 64 patients were found to have AF (Males – 37); CHA2DS2-VASc score (Mean ±SD) 3.63 ±1.5. 40 of 47 (85.4%) were on antithrombotic drugs. Table 1 and 2 lists the pattern of antithrombotic usage. Time in therapeutic range (TTR) could not be established in patients who were on warfarin because of the poorly monitored International Normalized Ratio (INR) values.

Observations and Conclusion: In our study, we found that the penetration of anticoagulation therapy in AF patients was inadequate. Almost half of the eligible patients were not prescribed with the oral anticoagulation therapy. Also, warfarin treated patients need awareness about proper INR monitoring. Interestingly, a patient with CHA2DS2-VASc score 1 is on warfarin. Also, antiplatelet therapy was substituted as the mainstay of treatment in a significant number of patients with AF. Therefore proper training and awareness about OAC use in AF for healthcare professionals is strongly recommended.

Title: Update on Lowering Cholesterol and Glucose: New Therapies for a new era
Author(s): Giugliano, R.P.
Lowering blood cholesterol and maintaining normal glucose are two mainstays of therapies aimed to prevent and manage atherosclerosis. In the past decade numerous treatments that are more effective to lower low density lipoprotein cholesterol (LDL-C) and glucose have been introduced into clinical practice. More recently, several new drugs in both areas have been developed that not only are more effective in reducing levels of LDL-C and glucose, but also provide clinical benefit with important reductions in future cardiovascular events.

This talk will include updates covering ezetimibe, a cholesterol absorption inhibitor, and the PCSK9 inhibitors – two promising LDL-C lowering therapies that offer benefit beyond statin therapy alone in management of hyperlipidaemia. In addition, updates on the latest hypoglycaemic agents, including inhibitors of DPP4, GLP, and SGLT will be reviewed. For both areas, the recent clinical trials that demonstrated incremental clinical benefits with these newer agents will be presented. Finally the latest guidelines in management of cholesterol and diabetes will be discussed with an emphasis on the roles of the newest therapeutics.

Title: Acute Beta Blocker Overdose Management: Factors Associated with Cardiovascular Mortality in a Caribbean Intensive Care Unit
Objective: Beta-adrenergic antagonists are commonly used worldwide to treat hypertension, tremor, migraines, ischemic heart disease, heart failure, arrhythmias, portal hypertension, angina and panic attack. Propranolol, a beta-adrenergic antagonist with membrane stabilizing proprieties, is the most common toxic used in suicide attempts in Martinique.

Though respiratory depression, bronchospasm, bradycardia, severe hypotension, and seizures may result from beta blocker intoxication, cardiovascular depression appears to be the most common cause of morbidity and mortality in severe acute beta blocker poisoning. Massive beta-blocker ingestions may cause prolonged QRS intervals may also be associated with refractory cardiac failure. Our objectives were to determine factors that are associated with the development of cardiovascular mortality.

Methods: We conducted a retrospective study over 10 years (January 2005 to December 2015), including all poisoned patients admitted and treated to the Emergency Department, and the Intensive Care Unit. During this period, there were over 10 beta-adrenergic antagonist exposures per year reported by the medical records department. These poisonings accounted for an average of 5 deaths annually.

Results: Three Hundred and eight patients (173 males, 135 females) were admitted to the ICU for severe acute poisonings. Median age: 46.5 years (16–79); SAPS II, 120 (49–94). Among these 308 patients, 100 had ingested high doses of cardiotoxicants [class I ant-arrhythmic drugs (40%), β-blockers (15%), calcium-channel blockers (10%)]. Fifty patients (50%) survived, including 18 to prolonged cardiac arrest. Bad prognostic factors in ECLS-treated poisoned patients for beta blocker poisoning, were as follows: QRS enlargement on admission, SAPS II score on admission, Extracorporeal Life Support (ECLS) performance under massage, potential coingestants, arterial pH and lactate concentration (10.5 mmol/l).

Conclusion: The most important factor associated with an increased risk of cardiovascular mortality in beta blocker poisoning is the exposure to a beta blocker with stabilizing activity. The identification of risk factors allows physicians to
identify patients at greatest risk. ECLS appears to be an efficient salvage technique in case of refractory toxic cardiac failure or arrest.


Title: Right Heart Dysfunction in Heart Failure with Preserved Ejection Fraction and Worsening Renal Function
Author(s): Mukherjee, M.; Sharma, K.; Madrazo, J.; Tedford, R.J.; Russell, S.D.; Hays, A.G.
Background: In urban populations, worsening renal function (WRF) commonly occurs in patients hospitalized with acute decompensated heart failure with preserved ejection fraction (HFrEF). However, the mechanisms for development of WRF in the setting of acute heart failure in HFrEF are unclear. In the present study, we assessed conventional echocardiographic measures of right ventricular (RV) chamber size and function to determine whether adverse remodelling of the RV is related to WRF in HFrEF patients.

Methods: We characterized 87 adult HFrEF patients (EF>50%) who were hospitalized to Johns Hopkins Hospital (between July 2011 to June 2012) for acute decompensated HFrEF and retrospectively examined right heart parameters by echocardiogram according to ASE guidelines. WRF was defined as a serum Creatinine (Cr) increase of ≥0.3 mg/dl within 72 hours of hospitalization.

Results: There were 28 (32%) patients who developed WRF (mean Cr increase = 0.9 ±0.1 mg/dl) during the hospitalization with the following demographics: mean age (±SEM) 65 ±2.6yrs, 21 women (75%), 23 Black (82%). LV medial E/e' was slightly greater in the WRF group (WRF vs no WRF: 20.5 ±8.8 vs 14.4 ±9, p=0.05), however RVSP (WRF vs no WRF: RVSP 46.5 ±14.3 mmHg vs 50 ±20 mmHg, p=0.52), and estimated right atrial (RA) pressure (8.3 ±5 mmHg vs 6.4 ±4.5 mmHg, p=0.10) were similar between the WRF group compared to the no WRF group respectively. There was no significant difference in mean RV basal diameter between groups (WRF vs no WRF: 3.82 ±0.76cm vs 3.82 ±0.1cm, p=0.50), however there was a significant increase in both RV wall thickness (WRF vs no WRF: 51 ±1.1mm vs 43 ±0.63mm, p=0.002). In addition, the RV FAC (fractional area change, surrogate for RVEF) was significantly lower in the WRF group (45.6 ±1% vs 40 ±1.8%, p=0.005).

Conclusion: Linear dimensions of RV chamber size did not distinguish HFrEF patients with and without WRF. However, in HFrEF patients with WRF during hospitalization, there was a significant decrease in RV FAC and significant increase in RA pressure and RV free wall thickness. These findings suggest that adverse RV remodelling occurs in HFrEF patients with WRF, and may identify patients who are at higher risk.

Title: New Developments in Structural Heart Disease
Author(s): Maini, B.
Structural heart disease is a new frontier in cardiovascular medicine and traditionally has been cardiothoracic surgery’s forte. Lately, catheter based therapies have revolutionized the care of these patients. Therapies such as TAVR which were originally designed for high risk patients, are now being considered for low risk patients. Similarly, percutaneous mitral valve therapies have significantly improved the quality of life in patients who had no other recourse.

Left atrial appendage closure is turning out to be one of the biggest paradigm shifts in cardiovascular care, and we are only skimming the surface.

There are multiple other device based innovations that are on the horizon and likely to change how to think and breathe cardiovascular medicine.

Title: Using Haemodynamics to Determine the Trustworthiness of a Patient's Echocardiogram Reading for Mitral Regurgitation
Author(s): Henry, L.; Baliram, K.; Yorke, E.; Dass, I.
Discordance has been proven between echocardiography and Magnetic Resonance Imaging (MRI) in assessing the severity of mitral regurgitation. This is due to the failure of 2D echocardiogram records to capture the severity of certain mitral valve regurgitant jets which adhere to valve walls and change shape (Coanda Effect). Such discordance produces a need for a greater understanding of the reliability of any 2D echocardiogram image to diagnose mitral regurgitation severity. Applying control-volume analysis, we implement an analytical, computational and data-driven method to predict the reliability of a 2D echocardiogram image to assess MR severity, based solely on the undeniable geometries of the solid mitral valve walls that show up clearly in the echocardiogram readings.
Purpose: To evaluate the association of EKG determined LVH on 30-day fatality in patients presenting with an incident of stroke.

Methods: Data from 544 participants of the Ermancia II cohort performed from November 1, 2011, to October 31, 2012, were examined. EKG was blindly analysed by a senior investigator. The Cornell voltage duration product was determined, and a cut off of 2440 mv.msec was taken to determine LVH. The main outcome was 30-day fatality.

Results: Twenty-two participants with pacemaker or electric conduction defects were excluded. LVH was found among 86 patients (15.6%). LVH patients were more frequently labelled as hypertensive (83.7 vs 62.4%) or receiving anti-hypertensive medications (70.9 vs 49.8%) than their counterparts (all p<0.001). They were slightly older, (73.8 ±13.8 vs 71.9 ±15.6 years), but had no differences in systolic (159.2 vs 156.7mmHg) or diastolic blood pressure (89.2 ±20.1 vs 87.4 ±17.9mmHg), all p>0.30. Death occurred in 21 patients (24.7%) with LVH, compared to 77 (17.3%) in controls. The adjusted hazard ratio of 30-day fatality associated with LVH was 1.7 (95 per cent confidence interval 1.1 to 2.9, P=0.001).

Conclusion: Electrocardiographically-determined LVH is strongly and independently associated with an increased risk of death during the first month following stroke. A more detailed analysis is required to identify the determinants of this excess mortality.

Title: Post-Surgical Multidisciplinary Management of Ascending Aortic Repair


Introduction: Repair of ascending aortic aneurysms, including the Bentall procedure, ranks amongst the most complex interventions in CV surgery. Our Center is a recently reorganized program that applies a comprehensive interdisciplinary approach in the care of these patients.

Objectives: To study outcomes during the post-surgical management of Bentall repair in the ICU as a reflection of an interdisciplinary approach.

Methods: From January to December 2015, 135 cardiac surgeries were performed, including 15 consecutive aneurysm repairs described here for analysis. As a standardized protocol, all cases were thoroughly discussed in meetings involving Surgeons, Cardiologists, Anaesthesiologists, and non-medical personnel that participated in their pre- and post-operative care. Records were reviewed for data gathering that included clinical histories, intraoperative measures, ICU stay, and follow-up documented by phone and subsequent visits.

Results: Most patients (73%) were male, age 57 (17-74 yrs); risk factors included: Hypertension (87%); Diabetes (20%), and smoking (33%). Surgery was elective in 73%; urgent in 20%, and emergent in 7%. All received aortic graft conduits, plus mechanical prosthetic valves in 60% and biological in 13% (mean STS score = 14); 27% had valve-sparing procedures. Cross-clamping was 117 minutes with 163 minutes of extracorporeal circulation; duration of mechanical ventilation was 20 hours, ICU stay 3.6 days and total hospitalization 5.7 days. No readmissions or mortality occurred at 30 days.

Conclusion: This experience reflects the benefits of a multi-member approach in the management of complex aortic repair cases including improved post-surgical ICU care, length of stay, and outcomes.

Title: Cardiac Stab Wounds: A Case Series

Author(s): Smith, A.; Powlett, C.; Went, T.

Objective: To review the diagnostic modalities used and outcomes in patients presenting with cardiac stab wounds.

Methods: Demographic and clinical data were collected and analysed retrospectively on patients who were operated on for cardiac stab wounds between 1994 and 2015.

Results: Twenty-one patients underwent surgery for cardiac stab wounds during the study period. There were four deaths for an overall mortality of 19%. Three patients were operated on post cardiac arrest. Seven patients had preoperative investigations; in four cases, the diagnosis of cardiac injury was confirmed, the others were operated on based on clinical signs. Twelve patients had emergency median sternotomy, five had thoracotomies (three in A&E), and three had both sternotomy and thoracotomy; one patient had delayed repair of his apical VSD electively. One patient
required cardiopulmonary bypass to repair his cardiac injury. Eight patients had other associated injuries. The mean time the patients spent in A&E was 102 minutes (range 15 – 435 minutes). Length of stay ranged from four to fifty-six days with a mean of eleven days.

Conclusion: The majority of cardiac stab wounds presenting to our institution are unstable, and require surgery on clinical grounds. Arresting prior to surgery was the only risk factor for death. Patients with cardiac stab wounds can survive for long periods prior to surgery,

Title: Contemporary Management of Severe Aortic Stenosis
Author(s): St. John, M.
Severe symptomatic aortic stenosis is a rapidly fatal condition. Surgery has long been the gold standard for treatment. Yet as many as 30% of patients who meet criteria do not undergo AVR due to prohibitive risk, patient or physician preference. Recently, transcatheter AVR (TAVR) has emerged as an option for treatment in patients at prohibitive and high surgical risk. With the pivotal PARTNER trial showing first superiority of TAVR compared with medical management and then equipoise with surgery in high risk surgical patients use of this technology has rapidly increased in the US since FDA approval in 2011. Both balloon expandable (Edwards Sapien Valve) and self-expanding (Medtronic CoreValve) valves are now available. The TAVR process has cemented in cardiology the importance of a multidisciplinary approach (the Heart Team) in evaluating and managing the most complex patients. Among other lessons learned are that TAVR saves lives, the valves perform very well compared to surgically implanted valves and, relative to other treatments, are cost effective. Perhaps the most important lesson, however, is that not everyone benefits. A crucial function of the Heart Team articulated in the 2014 Valvular Heart Disease Guidelines is to exclude patients “in whom the existing comorbidities would preclude the expected benefit from the correction of AS”.

We will review the contemporary management of AS and highlight the Miami Cardiac and Vascular Institute experience.

Title: "Myocardial Viability: Where Do We Stand in 2016" Assessment
Author(s): Jaitley, S.C.; Shenoy, M.M.; Bakshi, S.
Detection of myocardial viability in heart failure and ischemic heart disease patients is becoming increasingly important with the developing techniques and methodologies in nuclear cardiology, today. What is hibernating and ‘stunned’ myocardium known for years in a patient now can become a source of added survival in years to a patient, if suitably detected, quantified, and offered appropriate timely intervention.

With the use of cardiac PET and/ or combined CT or SPECT study, one can determine the regional coronary microvascular flow, wall motion abnormality and metabolic function in those segments suspected to be ‘hibernating’, and thereby quantitate the viability by estimating the actual amount of functional myocardium which has compromised function as well as vascularity. An attempt to improve the vascularity in these segments shall return the regional contractility to normal or near normal in those regions if performed early, provided the metabolic functionality was shown in those hypo-contractile segments. It is now becoming increasingly indisputable that if one can demonstrate at least 10% viability in region of interest (ROI), a definite increase in ejection fraction can be seen in the global left ventricular function, which in turn translates into reduction of symptoms, increased exercise tolerance, and improved survival in those patients.

Hence, it is of paramount importance to identify myocardial viability in those HF and IHD patients where the myocardial segments initially were considered ‘non-functional’ by demonstrating increased metabolic uptake by the PET tracers, combining that with the CTA or SPECT to assess their coronaries and/or myocardial perfusion bed in the ROI, and thereby help the angiographer or the surgeon to offer the suitable revascularization, if amenable and indicated.

The hybrid technology in imaging used as above eliminates a great deal of false results, both positives and negatives, and thereby offers a non-invasive path in the algorithm to arrive at a reasonable inference whether or not to take the patient for PCI or surgical intervention.

The method employs a statistically significant route to recommend patients for intervention or to follow non-interventionally under optimized and maximized medical regimen.

Title: Cardiac MRI in Pericardial Diseases
Author(s): Babu, S.; Kishore, R.
Objective: MRI has the advantage of highly spatial resolution and temporal resolution with high soft tissue contrast and is capable of having multiplanar imaging, which is an available tool in elevation of pericardial diseases. MRI plays an important role in morphologic and functional elevation of pericardial diseases.

Findings: Various cases were studied and various diagnoses of pericardial effusion, pericardial haematoma, cardiac
tamponade, pericarditis, pericardial constriction, and pericardial cysts, were made with high accuracy when compared to conventional investigations.

Conclusion: MRI used for characterization and delineation of the extent of spread of pericardial diseases. Various imaging sequences are available, and so MRI protocol should be optimized and tailored to the specific clinical condition that is being evaluated. MRI is a vital diagnostic tool in the evaluation of pericardial diseases, particularly inflammation and constriction, because it can provide both morphologic and functional information essential for determining the optimal therapeutic strategy.
Tenet Florida Heart & Vascular Network connects 10 hospitals throughout South Florida with highly skilled cardiologists, cardiovascular surgeons, and advanced technology to provide exceptional patient care.

**Centers of Excellence**
Centers for highly specialized services:
- Advanced Heart Failure
- Structural Heart
- A-Fib
- Aortic Disease

**Experience**
From performing the first open heart surgery in Broward County in 1974 to currently being ranked #1 in Florida for cardiac surgery by Healthgrades, Tenet Florida’s award-winning heart hospitals offer quality comprehensive care from prevention to recovery and perform nearly 1,000 open heart surgeries annually.

**Technology**
Our cardiologists and staff use leading-edge technology that can extend treatment capabilities and reduce risks. Our fully digital computerized advanced X-ray systems enable physicians to capture and view detailed 3D images of a patient’s cardiac vasculature, facilitating faster and more accurate diagnosis and treatment of cardiac disease. Additionally, patients may benefit due to shorter imaging time, a lower dose of x-ray and a quicker recovery.

**For additional information, please call 855.836.3846**

Coral Gables Hospital | Delray Medical Center | Florida Medical Center – a Campus of North Shore | Good Samaritan Medical Center
Hialeah Hospital | North Shore Medical Center | Palm Beach Children’s Hospital | Palm Beach Gardens Medical Center
Palmetto General Hospital | St. Mary’s Medical Center | West Boca Medical Center
ALLEVIATING PAIN
RESTORING HEALTH
EXTENDING LIFE

FURTHER, TOGETHER
Medtronic and the Caribbean Cardiac Society have been improving the health of the people in the Caribbean through meaningful innovation for 20+ years. We are excited to present a number of products that will continue that trend. Join us at the conference to find out more!

www.medtronic.com