22nd Annual Update on Pediatric and Congenital Cardiovascular Disease

CHALLENGES, OPPORTUNITIES AND SOLUTIONS

Feb 13 – 17, 2019
chop.cloud-cme.com

Hyatt Regency Huntington Beach Resort and Spa, Huntington Beach, Calif.

Children’s Hospital of Philadelphia
Cardiac Center
WELCOME

Today’s practice of pediatric and congenital cardiovascular medicine spans a wide spectrum of care both from the temporal perspective, as well as across a wide variety of disciplines. State-of-the-art management today not only includes proper treatment of the heart disease itself, but also better understanding and care strategies for the myriad consequences and associated challenges of congenital and pediatric heart disease.

With this approach in mind, we present our conference, the 22nd Annual Update on Pediatric and Congenital Cardiovascular Disease. Our theme this year is Challenges, Opportunities and Solutions. The course faculty will present multiple talks in plenary sessions, as well as presentations in subspecialty breakout sessions and a series of moderated panels of experts, covering all areas and topics related to the comprehensive care of the unborn, neonate, child, teen and young adult with cardiovascular disease.

Through effective learning and improved understanding, the goals of this educational conference are to give healthcare providers the tools necessary to create a normal quality and duration of life for individuals with pediatric and congenital cardiovascular disease.
CALL FOR ABSTRACTS

Abstract Submission Deadline: Monday, Nov. 19, 2018 (11:59 p.m. EST)

Notification of Acceptance: Monday, Dec. 10, 2018

Oral Abstract Presentations: Thursday, Feb. 14

Poster Abstract Presentations: Thursday, Feb. 14, through Saturday, Feb. 16, 2019

Course Objectives 2019

At the completion of this program, the participant will be better able to:

- Describe the science and knowledge base of information that support clinical practice for the patient with pediatric and congenital cardiovascular disease
- Outline some of the latest innovations and their potential for changing care in pediatric and congenital cardiovascular disease
- Understand the concepts of mechanical circulatory support and heart failure in pediatric and congenital cardiovascular disease
- Understand the emerging role of the lymphatic system in congenital heart disease
- Appreciate the importance of psychological wellness and neurocognitive challenges in patients with congenital heart disease
- Review the risks and benefits of physical activity in congenital heart disease
- Describe management and outcomes for complex congenital heart disease
- Find answers to many questions related to the clinical care of patients with congenital heart disease
- Understand the principles behind the novel and emerging field of heart care before birth
- Describe the latest research in diagnostic testing for congenital heart disease
- Discuss the latest concepts and treatment strategies for the premature infant with heart disease
- Comprehend the emerging recognition of complications and identify solutions for the patient after Fontan operation
- Understand the newest concepts in anesthesia and critical care for the pediatric and congenital cardiovascular patient
- Discuss the latest techniques and developments in the field of pediatric cardiovascular perfusion
- Understand the underlying principles and best practices for post-operative care by nurses and other front-line providers for the neonate with congenital heart disease
- Explain the challenges and solutions in caring for the patient with hypoplastic left heart syndrome

Registration

The conference will be held Wednesday, Feb. 13, through Sunday, Feb. 17, 2019, at the Hyatt Regency Huntington Beach Resort and Spa, Huntington Beach, Calif. Registration is Wednesday, Feb. 13, from 6:30 a.m. to 6 p.m., and Thursday, Feb. 14, from 6:30 a.m. to 6 p.m.
Course Fees

The registration fee for the five-day conference is $995 for physicians and $595 for other healthcare professionals and physicians-in-training. The registration fee includes tuition, online presentations, daily continental breakfast, lunch and conference gala reception.

Full Conference Registration: Wed, Feb. 13, 4 p.m. to Sunday, Feb. 17, noon

Physicians ............................................................................... $995
Nurses, Medical Students, Residents, Fellows and Other Healthcare Professionals ..................................................... $595

Optional Preconference Seminars

You must be registered for the full conference to register for a preconference.

No. 1: We Collaborate, We Learn and Our Patients Benefit: Quality Improvement in Pediatric and Congenital Cardiovascular Care ........................................ $150
No. 2: Heart Failure and Mechanical Circulatory Support in Pediatric and Congenital Cardiovascular Care............... $150
No. 3: Congenital Heart Disease and Postoperative Management: A Comprehensive Review for Nursing and Front-line Providers ........................................ $150

Register online: chop.cloud-cme.com

ACCME Accreditation Statement

Children's Hospital of Philadelphia is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.

AMA Credit Designation Statement

Children's Hospital of Philadelphia designates this live activity for a maximum of TBD AMA PRA Category 1 credits™. Physicians should only claim credit commensurate with the extent of their participation in the activity.

AMA PRA Category 1 credits™ are designated as follows:

Wednesday, Feb. 13, 2019

Optional Preconference Seminars – 7:30 a.m. to 3:30 p.m.

No. 1: We Collaborate, We Learn and Our Patients Benefit: Quality Improvement in Pediatric and Congenital Cardiovascular Care = 6
No. 2: Heart Failure & Mechanical Circulatory Support in Pediatric and Congenital Cardiovascular Care = 6.25
No. 3: Congenital Heart Disease and Postoperative Management: A Comprehensive Review for Nursing and Front-line Providers = 7.5

Main Conference: Wednesday, Feb. 13, 4 p.m. to Sunday, Feb. 17, 2019, noon

Total AMA PRA Category 1 credits™ = 30

American Board of Pediatric Maintenance of Certification (MOC) Lifelong Learning Self-Assessment (Part 2)

Successful Completion of this CME activity, which includes participation in the activity, with individual assessments of the participant and feedback to the participant, enables the participant to earn 19 MOC points in the American Board of Pediatrics (ABP) Maintenance of Certification (MOC) program. It is the CME activity provider's responsibility to submit participant completion information to ACCME for the purpose of granting ABP MOC credit.

Nursing Accreditation Statement

Children's Hospital of Philadelphia is an approved provider of continuing nursing education by the Pennsylvania State Nurses Association Approver Unit, an accredited approver by the American Nurses Credentialing Center's Commission on Accreditation.

Perfusion Accreditation Statement

An application for CEU Category 1 hours will be submitted.

Services for People with Disabilities

If special arrangements are required for an individual with a disability to attend this meeting, please contact the Continuing Medical Education Department at 215-590-5263

Cancellation and Refund Policy

Children's Hospital of Philadelphia reserves the right to cancel or postpone any course due to unforeseen circumstances. In the event of cancellation or postponement, Children's Hospital of Philadelphia will refund registration fees but is not responsible for any related costs or charges assessed by airlines and travel agencies. In order to process refunds for course withdrawals, cancellations must be received in writing by Monday, Jan. 28, 2019. Refunds will be issued for the amount of registration less a $100 service charge.

Hotel Information

A block of rooms has been reserved at the Hyatt Regency Huntington Beach Resort and Spa in Huntington Beach, Calif. The group rate is $299 single or double occupancy plus a 13 percent room tax, 7 percent sales tax and 3.33 percent HB assessment tax. Participants must reserve their own hotel accommodations by calling 714-698-1234. To reserve your hotel room online, go to http://bit.ly/cardiology2019hotel.

For the reduced conference rate, mention the CHOP Pediatric Cardiology Conference when making your reservation. The conference rate begins Monday, Feb. 11, 2019. This rate will only be available until Monday, Jan. 18, 2019. Reservations made after Jan. 18 will be accepted on space and rate availability.
Optional Preconference No. 1
We Collaborate, We Learn and Our Patients Benefit: Quality Improvement in Pediatric and Congenital Cardiovascular Care

8 a.m. Introduction to QI Science and Principles
Jeffrey Anderson, MD

8:30 a.m. Data and Registries in Congenital Heart Care
Sara Pasquali, MD

9 a.m. The NPC-QIC
Gail Wright, MD

9:20 a.m. PC3
Susan Schachtner, MD

9:40 a.m. Break

10 a.m. IMPACT Registry
Jonathan Rome, MD

10:20 a.m. Single Ventricle/Fontan
Adel Younoszai, MD

10:45 a.m. ECHO
Anitha Parthiban, MD

11:05 a.m. Fetal
Jay Pruetz, MD

11:25 a.m. CLABSI Reduction in the Cardiac ICU
Marissa Brunetti, MD

11:45 a.m. Questions & Answer
Faculty

Noon Lunch

12:30 p.m. Building a Comprehensive QI Effort: The CHOP Cardiac Center Experience
Shobha Natarajan, MD

1 p.m. What Is Value in CHD Care?
Stephen Roth, MD

1:30 p.m. Quality Improvement Roundtable discussion
Shobha Natarajan, MD; Jeffrey Anderson, MD; Sara Pasquali, MD; Gail Wright, MD; Susan Schachtner, MD; and Faculty

3 p.m. Adjourn

Optional Preconference No. 2
Heart Failure and Mechanical Circulatory Support in Pediatric and Congenital Cardiovascular Care

8 a.m. How Does the Heart Fail I: Primary Cardiomyopathies in Children
Steven Lipshultz, MD

8:20 a.m. How Does the Heart Fail II: Friedreich Ataxia and Duchennes Muscular Dystrophy
Kimberly Lin, MD

8:40 a.m. How Does the Heart Fail III: Cardiovascular Complications of Hemoglobinopathies
John Wood, MD

9 a.m. Introduction to the Surgical Aspects: ECMO vs. VAD(s) — What Are the Differences?
Joseph Turek, MD

9:20 a.m. The Indications for Mechanical Circulatory Support: When Is it Time to “Go on” Support?
Joseph Rossano, MD

9:40 a.m. Break

10 a.m. The Spectrum of Devices in 2019: What’s Available and When to Use Which Device?
Christopher Mascio, MD
Optional Preconference No. 3  
Congenital Heart Disease and Postoperative Management:  
A Comprehensive Review for Nursing and Front-line Providers

7:30 a.m. Understanding Segmental Cardiac Anatomy  
Paul Weinberg, MD

7:45 a.m. Screening, Diagnosis and Preoperative Assessments  
Kathryn Dodds, MSN, CPNP-AC

8 a.m. Open Heart Surgery: CPB, X Clamp, Circulatory Arrest  
Christopher Mascio, MD

8:20 a.m. ICU Management Issues and Concerns  
Maryam Naim, MD

8:45 a.m. Break

9 a.m. ECHO: Effusions, Function, Obstruction, Regurgitation, Thrombus and Holes  
David Goldberg, MD

9:15 a.m. What the Chest X-ray Can and Cannot Show You  
Aaron Dewitt, MD

9:30 a.m. How to Decipher Cardiac Catheterization Data  
Andrew Glatz, MD

9:45 a.m. Postoperative Arrhythmias: SVT, JET, Heart Block, VT  
Maully Shah, MD

10 a.m. ECMO and Mechanical Support in Children with CHD  
Chitra Ravishankar, MD

10:15 a.m. Sedation and Pain Management after Cardiac Surgery  
Aaron Dewitt, MD

10:30 a.m. Break

10:40 a.m. Ventricular Septal Defect  
Anatomy/Morphology – Paul Weinberg, MD  
Surgery – Gary Raff, MD  
Postoperative Care and Outcomes – Ellize Ergina, MSN, CPNP

11 a.m. Complete Common Atroventricular Canal Defect  
Anatomy/Morphology – Paul Weinberg, MD  
Surgery – James E. O’Brien, MD  
Postoperative Care and Outcomes – Lisa Laddish, DNP, CPNP

continued>
11:20 a.m.  **Tetralogy of Fallot**
Anatomy/Morphology – Paul Weinberg, MD
Surgery – James E. O’Brien, MD
Postoperative Care and Outcomes
Lisa Laddish, DNP, CPNP

11:40 a.m.  **Truncus Arteriosus**
Anatomy/Morphology – Paul Weinberg, MD
Surgery – Gary Raff, MD
Postoperative Care and Outcomes
Kathryn Dodds, MSN, CPNP-AC

Noon  **D-Transition of the Great Arteries**
Arterial Switch Anatomy/Morphology
Paul Weinberg, MD
Surgery – Christopher Mascio, MD.
Postoperative Care and Outcomes
Kathryn Dodds, MSN, CPNP-AC

12:20 p.m.  Lunch

12:40 p.m.  **Total Anomalous Pulmonary Venous**
Return Anatomy/Morphology
Paul Weinberg, MD
Surgery – James E. O’Brien, MD
Postoperative Care and Outcomes
Ellize Ergina, MSA, CPNP

1 p.m.  **Coarctation**
Anatomy/Morphology – Paul Weinberg, MD
Surgery – Gary Raff, MD
Postoperative Care and Outcomes
Lisa Laddish, DNP, CPNP

1:15 p.m.  **Single Ventricle: Stage 1, Bidirectional Glenn, Fontan**
Anatomy/Morphology – Paul Weinberg, MD.
Surgery – Christopher Mascio, MD
Postoperative Care and Outcomes
Kathryn Dodds, MSN, CPNP-AC

2:15 p.m.  **Discharge Planning and Home Monitoring**
Theresa Alquiros, MSN, CPNP

2:30 p.m.  **Behavioral and Developmental Concerns in CHD**
Daniel Licht, MD

2:45 p.m.  **Growing Up with Congenital Heart Disease**
Yuli Kim, MD

3 p.m.  **Q & A**

3:30 p.m.  Adjourn
THURSDAY, FEB. 14

6:45-7:45 a.m.  Sunrise Session I: How to Read an ECG ... and Never Get it Wrong!
  Pearls of Wisdom and Didactic Case Reviews
  Mitchell Cohen, MD; Maully Shah, MBBS; Ronn Tanel, MD

Sunrise Session II: Had No Clue What to do ... but Somehow it Turned out Fine!
  Clinical Conundrums and Successful Solutions Found
  Richard Ohye, MD; Christopher Petit, MD; Christina Vander Pluym, MD

Break/Visit the Exhibits: 10 – 11 a.m.
Poster Session No. 1
Simultaneous Breakout Sessions
11 a.m. – 1 p.m.
Focus on: Double-outlet Right Ventricle
8 a.m. Mechanics and Physiology of the Lymphatic System
  Vibeke Hjortdal, MD
9 a.m. Imaging and Treatment of Lymphatic Insufficiency
  Yoav Dori, MD
9:30 a.m. Surgical Strategies for Re-routing the Lymphatic System
  Viktor Hraska, MD
10 a.m. Challenges and Opportunities in Building and Maintaining a Novel Clinical Program for Lymphatic Care
  Erin Pinto, MSN
11 a.m. Illustrative Cases and Panel Discussion: Demonstration of What We Know, What We Don’t Know, and What We Need to Know …
  Jonathan Rome, MD

Plenary Session II: 8 – 10 a.m.
The “Other” Circulation: The Lymphatic System
8 a.m.  Mechanics and Physiology of the Lymphatic System
  Vibeke Hjortdal, MD
8:20 a.m.  Imaging and Treatment of Lymphatic Insufficiency
  Yoav Dori, MD
8:50 a.m.  Surgical Strategies for Re-routing the Lymphatic System
  Viktor Hraska, MD
9:10 a.m.  Challenges and Opportunities in Building and Maintaining a Novel Clinical Program for Lymphatic Care
  Erin Pinto, MSN
9:30 a.m.  Illustrative Cases and Panel Discussion: Demonstration of What We Know, What We Don’t Know, and What We Need to Know …
  Jonathan Rome, MD
10 a.m.  Adjourn

11 a.m. Anatomy – Paul Weinberg, MD
11:15 a.m. Imaging: Prenatal and Neonatal Preop
  Craig Fleishman, MD
11:30 a.m. MRI and 3D Printing for Surgical Planning in Complex DORV
  Mark Fogel, MD
11:45 a.m. Surgical Strategies for Repair of DORV
  Viktor Hraska, MD
Noon Science and Surgical Practice of Conduits
  Joseph Turek, MD
12:15 p.m. Catheter-based Rehabilitation of Right Ventricle to Pulmonary Artery Conduits: Now and the Future
  Andrew Glatz, MD
12:30 p.m. Intermediate and Long-term Outcomes
  Yuli Kim, MD
12:45 p.m. Faculty Panel Q & A
1 p.m. Adjourn
Challenges and Opportunities in Heart Care Before Birth

11 a.m. How Can We Increase Prenatal Detection of Heart Disease?
Mark Sklansky, MD

11:15 a.m. Principles of Fetal Therapy: Can We Modify the Course of Nature Before Birth?
Jack Rychik, MD

11:30 a.m. Proving the Barker Hypothesis: Fetal “Programming” and Lifelong Health
James Priest, MD

11:45 a.m. The Psychological Impact of Prenatal Counseling for Congenital Malformations
Nadine Kasparian, PhD

Noon Characterization and Management of Mitral Valve Conditions in the Fetus
Shaine Morris, MD

12:15 p.m. Characterization and Management of Pulmonary Venous Anomalies in the Fetus
Jay Pruetz, MD

12:30 p.m. Fetal Detection of Coarctation of the Aorta
Anita Moon-Grady, MD

12:45 p.m. Fetal Pacing: A Dream or Reality?
Yaniv Bar-Cohen, MD

1 p.m. Adjourn

Challenges and Solutions in Cardiac ICU Care and Anesthesia: Case-based Scenarios

11 a.m. Pearls of Wisdom and Didactic Case Reviews
Maryam Naim, MD (lead); James Steven, MD (lead);
Aaron Dewitt, MD; Barry Markovitz, MD;
Frank McGowan, MD; Stephen Roth, MD;
Kurt Schumacher, MD; and Sarah Tabbutt, MD

1 p.m. Adjourn

Nursing Hot Topics: What Does the Evidence Say?

11 a.m. Implementation of a RED Discharge Initiative: Can We Improve the Discharge Process?
Melanie Guerrero, DNP, CPN

11:15 a.m. Innovative Strategies for Onboarding CICU Nurses: Can We Do This Better and Should We?
Sherrie Kubis, RN, BSN, CCRN

11:30 a.m. Preventive Cardiology: Is This a Pediatric Issue?
Connie Cephus, PhD, CPNP

11:45 a.m. Scope of Practice: Are We There?
Denise Donaghue, RN, MSN

Noon How Can We Best Assess Delirium in Cardiac Post-op Period?
Carol Okuhara, MSN, PCP-AC-CFN

12:15 p.m. Research Clinical Trials: Do They Matter and Are They Worth it?
Donna Sylvester, RN, BSN, MHA

12:30 p.m. Postoperative EEGs: Do They Make a Difference?
Lisa Laddish, DNP, CPNP

12:45 p.m. Can Nurses Create a Healing Environment and Reduce Opioid and Sedative Use?
Sandra Staveski, PhD, CPNP

1 p.m. Adjourn

Implementing Techniques to Get the Best Results in the OR

11 a.m. Effective Measures for Safe Use of VAD
Tami Rosenthal, MBA, CCP

11:20 a.m. Autotransfusion in Pediatric Cardiac Surgery: Big Devices for Small Volumes – Molly Dreher, CCP

11:40 a.m. NPC-QIC Norwood Conduct of Perfusion Survey Results: Does Practice Variation Make a Difference
James Reager, CCP

Noon Good Enough Just Isn’t Good Enough: Best Measure of Perfusion on Cardiopulmonary Bypass
Chelsea Capone, CCP

12:20 p.m. Normothermic Cardiopulmonary Bypass: Not for the Faint (or slow) of Heart – Frank McGowan, MD

12:40 p.m. Panel Discussion – How We Do it and Why: Faculty Will Share Techniques and Rationale. Open to Audience Questions. – Faculty

1 p.m. Adjourn
1 – 2 p.m. Buffet Lunch
Sponsored by

Moderated Panel of Experts 2 – 3 P.M.
Behavioral, Mental Health and Neurological Concerns in CHD
Panel Leader: Adrienne Kovacs, PhD, and Daniel Licht, MD
Panel Participants: J. William Gaynor, MD; Nadine Kasparian, PhD; Amy Jo Lisanti, PhD; William Mahle, MD; Shabnam Peyvandi, MD; and Nancy Pike, PhD

Top 5 Finalists for Best Scientific Abstracts
3 – 4:15 p.m.
David Goldberg, MD, and Sara Pasquali, MD
4:15 – 4:30 p.m. Break

Plenary Session III: 4:30 – 6:45 p.m.
What Influences Outcomes in Pediatric and Congenital Cardiovascular Disease?
4:30 p.m. Genomics and Personalized Medicine: Statin Use in the Young
Jonathan Wagner, MD
4:45 p.m. The Maternal-fetal Environment
J. William Gaynor, MD
5 p.m. Operational Variables: The Individual Healthcare Provider, the Team, the Institution and the System
Christopher Caldarone, MD
5:15 p.m. Early Healthcare Exposures and Experiences
Amy Jo Lisanti, PhD
5:30 p.m. A Healthy Lifestyle: Obesity and Overweight
Meryl Cohen, MD
5:45 p.m. Socioeconomic Status and Resource Availability
Shaine Morris, MD
6 p.m. A Model: Factors Impacting Outcomes in TOF
Elizabeth Goldmuntz, MD
6:15 p.m. Psychological Resilience
Adrienne Kovacs, PhD
6:30 p.m. Faculty Panel Discussion Q & A
6:45 p.m. Adjourn
**FRIDAY, FEB. 15**

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<tr>
<th>Time</th>
<th>Session</th>
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<tbody>
<tr>
<td>6:45-7:45 a.m.</td>
<td><strong>Sunrise Session III: It’s All about IMAGE:</strong> Thrilling Case Studies in Echo and Magnetic Resonance! Pearls of Wisdom and Didactic Case Reviews Mark Fogel, MD; Leo Lopez, MD; and Michael Quartermain, MD</td>
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<td>6:45-7:45 a.m.</td>
<td><strong>Sunrise Session IV: Well, I’ve Never Seen This Before!</strong> Clinical Case Scenarios and Important Lessons Learned Jacqueline Kreutzer, MD; Daniel Penny, MD; Chitra Ravishankar, MD; and Adel Younoszai, MD</td>
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<td>6:45-7:45 a.m.</td>
<td><strong>Sunrise Session V: Nursing Sunrise Session:</strong> Vasoactive Medications Kathryn Dodds, MSN, CPNP; Stacy Reynolds, DNP, CPNP; Dione Paras, MSN, CPNP; and Sandra Staveski, PhD, CPNP</td>
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**Plenary Session IV: 8 – 10 a.m.**

**Problems and Solutions: Let’s Talk About Exercise, Sudden Cardiac Death and Arrhythmias**

8 a.m.   Electrical and Genetic Causes of Sudden Cardiac Death  
Ronn Tanel, MD

8:15 a.m. The Young Athlete with Heart Disease  
Michael Silka, MD

8:30 a.m. A Public Healthcare Model I: Youth Heart Watch  
Victoria Vetter, MD

8:45 a.m. A Public Healthcare Model II: Project ADAM  
Stuart Berger, MD

9 a.m.  Congenital Anomalies of the Coronary Arteries  
Alan Friedman, MD

9:15 a.m. Premature Ventricular Contractions: What Do They Mean? When Is Too Many? How to Treat?  
Mitchell Cohen, MD

9:30 a.m. Exercise Stress Testing: Is it a Valuable Tool to Predict Risk and Prognosis?  
Paul Stephens, MD

9:45 a.m. Encouraging Exercise as Therapy in CHD: Is the Paradigm Shifting?  
Stephen Paridon, MD

10 a.m. Adjourn

**Break/Visit the Exhibits 10 – 11 a.m.**

**Poster Session No. 2**

**Simultaneous Breakout Sessions 11 a.m. – 1 p.m.**

**NURSING: The Top 8 Nursing Abstracts Will Be Formally Presented and Discussed**

**Challenges and Opportunities: Healthcare Administration in Congenital and Pediatric Cardiovascular Care**

11 a.m. Leading, Promoting and Supporting Child Health in the 21st Century: Perspective from a Hospital CEO  
Madeline Bell

11:15 a.m. Supporting and Promoting a Premier Cardiovascular Program in a Children’s Hospital: Perspective from the Chair of Pediatrics – Joseph St. Geme III, MD

11:30 a.m. Fostering and Developing Leadership Skills  
Stuart Berger, MD

11:45 a.m. Workforce Challenges in Pediatric Cardiac Care: Are We Training Enough Practitioners?  
William Mahle, MD

Noon Balancing Clinical, Research and Administrative Priorities – Stephen Roth, MD

12:15 p.m. The Cardiac Center Strategic Planning Process: Creating a Meaningful Plan with a Culture of Engagement and Collaboration  
Mark Schwartz, MBA

12:30 p.m. Faculty Panel Discussion – Led by Lawrence Barnes and Paul Viviano

1 p.m. Adjourn

**Advances in Imaging in CHD**

11 a.m.  Strain, Synchrony and Other Advanced Tools for Assessing Heart Function Using ECHO  
Laura Mercer-Rosa, MD

11:20 a.m. Three Dimensional Intraoperative TEE: Beauty and the Beast! – Matthew Jolley, MD

11:40 a.m. The Altered Tissue: Importance and Methods of Characterization of Fibrosis in CHD  
Mark Fogel, MD

Noon Appropriate Use Criteria for Outpatient Echocardiography – Mark Lewin, MD

12:20 p.m. Developing Contemporary Data on Normative Values: The Z-Score Projects  
Leo Lopez, MD
12:40 p.m. 3D ECHO: Case-based Examples Demonstrating Clinical Value – Anitha Parthiban, MD
1 p.m. Adjourn

**Challenges and Solutions: The Failing Heart**

11 a.m. The Biology of Right Ventricle Failure
Shelley Miyamoto, MD

11:20 a.m. Laboratory Models of Right Ventricle Dysfunction/Injury and Protection – Frank McGowan, MD

11:40 a.m. Imaging and Characterization of the “Failing” Right Ventricle – Laura Mercer-Rosa, MD

Noon The Physiological Benefits of Inter-atrial Shunting
David Celermajer, MD

12:20 p.m. The Failing Myocardium in Pulmonary Hypertension – David Frank, MD

12:40 p.m. Faculty Panel Discussion Specifically on the Challenges and Solutions of Right-sided Heart Failure – Faculty

1 p.m. Adjourn

**Trending Topics in Pediatric and Adult Congenital Perfusion**

11 a.m. Cardiopulmonary Bypass for the Micro-neonate
Chelsea Capone, CCP

11:20 a.m. Patient Blood Management: Maximal Effort
Tami Rosenthal, MBA, CCP

11:40 a.m. Managing the Complex Adult Congenital Patient
Gary Raff, MD

Noon Acute Kidney Injury and the Perfusionist: What Role Do We Play – Molley Dreher, CCP

12:40 p.m. Audience Participation: Current Practice and Trends. Audience will be presented with a group of questions to answer. The responses will be posted and discussion led by a panel of faculty.

1 p.m. Adjourn

**FREE AFTERNOON**

*Enjoy Huntington Beach and Southern California!*
SATURDAY MORNING
Fitness Fest

SATURDAY 6:15 – 7:45 a.m.
Where: Hyatt Regency Huntington Beach Resort and Spa
Fee: $25 (includes 5K Heart Run event T-shirt)

Registration required and limited to the first 200 registrants.

NEW THIS YEAR!
YOGA FOR YOUR HEART (AND MIND)
Saturday 6:15 – 7:30 a.m.
Where: Huntington Beach
Fee: $10
Plenary Session V: 8 – 10 a.m.

Awards and Featured Lectures

8 a.m.  11th Annual Jack Downes Lecture in Cardiac Anesthesia and Critical Care
        Randall Wetzel, MBBS

8:20 a.m.  8th Annual Featured Lecture in the Cardiovascular Basic and Translational Sciences
           Cecilia Lo, PhD

8:40 a.m.  19th Annual Featured Lecture in Cardiovascular Nursing: T. Garrett Rauch Memorial Lecture
           Nancy Pike, PhD

9 a.m.  17th Annual William J. Rashkind Memorial Lecture in Pediatric Cardiology
        Girish Shirali, MBBS

9:20 a.m.  19th Annual C. Walton Lillehei Memorial Lecture in Cardiovascular Surgery
           Jonathan Chen, MD

9:40 a.m.  Presentation of the Outstanding Investigator and Nursing Scientist Awards
           David Goldberg, MD, and Kathryn M. Dodds, MSN, CRNP

10 a.m.  Adjourn

Break/Visit the Exhibits 10 – 11 a.m.

Poster Session No. 3

Simultaneous Breakout Sessions 11 a.m. – 1 p.m.

**NURSING: Nursing Challenges and Opportunities:**

**Case Presentations**

Join the nursing faculty in a presentation of challenging cases that highlight the importance of working as a team.

Karen McCandless, MSN, CRNP; Stacy Reynolds, DPN, CRNP; Erin Messing, MSN, CPNP; Erin Pinto, MSN, CRNP; Connie Cephus, PhD, CPNP; Kathryn Dodds, MSN, CRNP; Jill Combs, MSN

**Focus on: Pulmonary Atresia with Intact Ventricular Septum**

11 a.m.  Anatomy – Paul Weinberg, MD

11:20 a.m.  Imaging: Prenatal and Neonatal Preop
            Michael Puchalski, MD

11:40 a.m.  Catheter-based Therapies – Christopher Petit, MD

Noon  Surgical Therapies – James O’Brien, MD

12:20 p.m.  Intermediate and Long-term Outcomes
            Craig Fleishman, MD

12:40 p.m.  Faculty Panel Discussion Q & A

1 p.m.  Adjourn

The Brain in CHD: Fetus to Adult

11 a.m.  Fetal Origins of Neurocognitive Deficits in CHD
         Shabnam Peyvandi, MD

11:15 a.m.  Blood Flow Patterns and Oxygenation in the Fetus with CHD – Vibeka Hjordtal, MD

11:30 a.m.  Impaired Cerebral Autoregulation in the Neonate with CHD – Jodie Votava-Smith, MD

11:45 a.m.  Structural and Functional Abnormalities of the CNS in the Newborn with Child CHD – Daniel Licht, MD

Noon  What Are the Modifiable Factors to Neurocognitive Deficit in CHD? – J. William Gaynor, MD

12:15 p.m.  Blood Flow to the Brain in the Reconstructed Single Ventricle: What We have Learned from Serial MRI
            Mark Fogel, MD

12:30 p.m.  Neurocognitive Deficits in the Adolescent and Adult with CHD – Nancy Pike, PhD

12:45 p.m.  Can Psychological Care Make a Difference in Congenital Heart Health? – Nadine Kasparian, MD

1 p.m.  Adjourn

The Premature Infant with Cardiovascular Disease

11 a.m.  The Patent Ductus Arteriosus: Gauging Impact and Strategies for Closure – Alan Friedman, MD

11:15 a.m.  Lung Disease and Pulmonary Hypertension in the Premature Infant – David Frank, MD

11:30 a.m.  Comprehensive Care Outside of the Heart: Supporting the Premature Organ Systems When There Is CHD
            Natalie Rintoul, MD

11:45 a.m.  Unique Aspects of Nursing Care for the Premature Infant with CHD – Megan Steigerwalt, RN

Noon  Ventilatory Strategies in Prematurity
         Andrew Costarino, MD

12:15 p.m.  Surgery for the Premature Infant with CHD: Operate or Wait? – Christopher Caldarone, MD

12:30 p.m.  Outcomes for the Premature Newborn with CHD
            David Axelrod, MD

12:45 p.m.  Faculty Panel Discussion Q & A

1 p.m.  Adjourn
### What Everyone Ought to Know about ECMO in the Current Era

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker(s)</th>
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</thead>
<tbody>
<tr>
<td>11 a.m.</td>
<td>Alternative Anticoagulation for ECMO</td>
<td>Myke Federman, MD</td>
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<tr>
<td>11:20 a.m.</td>
<td>Cardiohelp Use in Children: The CCHMC Experience</td>
<td>James Reagor, CCP</td>
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<td>11:40 a.m.</td>
<td>Cardiac ECMO: Challenges with Anticoagulation and Monitoring</td>
<td>Andrew Costarino, MD</td>
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<td>Noon</td>
<td>Timing and Optimization for Separating from ECMO</td>
<td>Maryam Naim, MD</td>
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<td>12:20 p.m.</td>
<td>Practice Makes Perfect: Drills and Dimulation</td>
<td>Kim Delacruz, CCP</td>
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<td>12:40 p.m.</td>
<td>Faculty Panel Discussion Q &amp; A</td>
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<td>1 p.m.</td>
<td>Adjourn</td>
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#### 1 – 2 p.m. Boxed Lunch

1:15-1:45 p.m. Lunchtime Roundtable 1: Genetic Testing for CHD: Time to Incorporate into Standard Clinical Care (Brief Presentation and Roundtable Discussion)  
Elizabeth Goldmuntz, MD, and James Priest, MD

1:15-1:45 p.m. Lunchtime Roundtable 2: Telemedicine in Pediatric and Congenital Cardiovascular Health (Brief Presentation and Roundtable Discussion)  
Mark Lewin, MD, and Gary Satou, MD

1:15-1:45 p.m. Lunchtime Roundtable 3: Early Signs of Adult Onset Cardiovascular Disease in the Young (Brief Presentation and Roundtable Discussion)  
Steven Lipshultz, MD, and Jonathan Wagner, MD

#### 1 – 2 p.m. Special Nursing Buffet Lunch

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### 2 – 3:30 p.m. Moderated Panel of Experts: Innovation in CHD: How to Promote it? How to Bring it into the Realm of Clinical Care?

- **What Is Innovation in Pediatric and Congenital Cardiovascular Disease** – Anthony Chang, MD (Session Leader)
- **Industry Search for Innovation** – Jacqueline Phillips, MD
- **Pacing Technology** – Yaniv Bar-Cohen, MD
- **Virtual Reality** – David Axelrod, MD
- **Novel Catheter-based Ideas** – Yoav Dori, MD
- **Surgical Innovation** – Richard Ohye, MD
- **Innovations in Heart Transplantation** – Joseph Turek, MD

Roundtable Discussion – Faculty Panel

### 3:30 – 3:45 p.m. Break

#### Plenary Session VI: 3:45 – 5:30 p.m.

- **Papers, People and Projects: Impact and Influence on Me Personally and on the Field of CHD Care** – Speaker Selects Three Items of Personal Impact/Influence Professionally and on the Field of CHD and Discusses

  - 3:45 p.m. David Celermajer, MD
  - 4 p.m. James Tweddell, MD
  - 4:15 p.m. Meryl Cohen, MD
  - 4:30 p.m. Jacqueline Kreutzer, MD
  - 4:45 p.m. Robert Shaddy, MD
  - 5 p.m. Roberta Williams, MD
  - 5:15 p.m. Daniel Penny, MD

#### 5:30 – 6:30 p.m. Highlighted Poster Session: Wine and Wisdom

Come review the science and meet the presenters of our fine choice selection of superb poster abstracts, for the discerning mind!

### 6:30 p.m. Adjourn
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<tr>
<th>Time</th>
<th>Topic</th>
<th>Speaker/Authors</th>
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</thead>
<tbody>
<tr>
<td>7 a.m.</td>
<td>Anatomical Variability of Left Ventricular Inadequacy</td>
<td>Paul Weinberg, MD</td>
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<tr>
<td>7:15 a.m.</td>
<td>The Complex Genetics of HLHS</td>
<td>Cecilia Lo, PhD</td>
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<tr>
<td>7:30 a.m.</td>
<td>Fetal Diagnosis of HLHS and the Diagnostic Challenges of Borderline LV Inadequacy</td>
<td>Michael Puchalski, MD</td>
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<tr>
<td>7:45 a.m.</td>
<td>Catheter-based Intervention in the Fetus with HLHS: Are Outcomes Improved Through Fetal Intervention?</td>
<td>Anita Moon-Grady, MD</td>
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<tr>
<td>8 a.m.</td>
<td>Surgical Strategies for Reconstruction: Options in 2019 and How to Choose?</td>
<td>James Tweddell, MD</td>
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<tr>
<td>8:15 a.m.</td>
<td>Ethical Challenges: When and How to Stand Down</td>
<td>Aaron Dewitt, MD</td>
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<tr>
<td>8:25 a.m.</td>
<td>Intensive Care for the Sick Neonate with HLHS Before and After Surgery: Physician Perspective</td>
<td>Sarah Tabbutt, MD</td>
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<tr>
<td>8:35 a.m.</td>
<td>Intensive Care for the Sick Neonate with HLHS Before and After Surgery: Nurse Perspective</td>
<td>Margaret Cates, RN, BSN</td>
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<td>Faculty Panel Discussion Q &amp; A</td>
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<td>9 a.m.</td>
<td>Break</td>
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<tr>
<td>9:15 a.m.</td>
<td>Interstage Monitoring: Yes, it Makes a Difference!</td>
<td>Therese Giglia, MD</td>
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<tr>
<td>9:25 a.m.</td>
<td>Feeding Challenges and Growth</td>
<td>Chitra Ravishankar, MD</td>
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<tr>
<td>9:35 a.m.</td>
<td>Strategies for Stage II Bidirectional Glenn and Fontan Completion</td>
<td>Christopher Mascio, MD</td>
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<tr>
<td>9:45 a.m.</td>
<td>Failure (at Any Stage) and the Role of Mechanical Circulatory Support</td>
<td>Kimberly Lin, MD</td>
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<tr>
<td>10 a.m.</td>
<td>After Planned Surgeries, There Is Still Work to be Done: Catheter Interventions</td>
<td>Andrew Glatz, MD</td>
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<td>10:15 a.m.</td>
<td>After Planned Surgeries, There Is Still Work to be Done: Medical Therapies</td>
<td>David Goldberg, MD</td>
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<tr>
<td>10:30 a.m.</td>
<td>After Planned Surgeries, There Is Still Work to be Done: Is Transplantation the Anticipated “Stage 4” in All?</td>
<td>Kurt Schumacher, MD</td>
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<td>Surveillance and Care: The Early (Wonder) Years</td>
<td>Adel Younoszai, MD</td>
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<td>11:10 a.m.</td>
<td>Surveillance and Care: The Challenges of Adulthood</td>
<td>Yuli Kim, MD</td>
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<td>11:30 a.m.</td>
<td>Stem Cells: Hope or Hype?</td>
<td>Ram Subramanyan, MD</td>
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<td>11:45 a.m.</td>
<td>The Vision: Where to Next for HLHS? What Still Needs to Get Done ...</td>
<td>Jonathan Chen, MD</td>
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<tr>
<td>Noon</td>
<td>Adjourn</td>
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Jonathan Chen, MD, Philadelphia
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Craig Fleishman, MD
Marl Fogel, MD
David Frank, MD
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Therese Giglia, MD
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Kimberly Lin, MD
Steven Lipshultz, MD
Amy Jo Lisanti, PhD
Cecilia Lo, PhD
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David Axelrod, MD
Yaniv Bar-Cohen, MD
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Stuart Berger, MD
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Chelsea Capone, CCP
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