

CARDIOLOGY 2019

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.



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.





GENERAL INFORMATION

Topics will include:

- Tackling challenges and finding solutions for conditions our patients face on a daily basis
- Exploration and wonder of the lymphatic system
- Heart care before birth
- Exercise and sudden cardiac death in the young
- The brain and CHD
- Bringing innovation to CHD care
- A 40-year retrospective on hypoplastic left heart syndrome
- Focus on specific conditions such as pulmonary atresia, double-outlet right ventricle – and more

Other benefits of attending include:

- Special sessions for nursing, perfusion specialists and healthcare administrators
- Preconference sessions on quality improvement, mechanical circulatory support, and intense CHD primers for nurses and frontline providers
- Opportunities to network and enjoy southern California's attractions: Disneyland, Knott's Berry Farm, whale watching, beach activities and more
- 5K Heart Fun Run and, new this year, Yoga for Your Heart on the beach
- More than 30 credits for physicians, nurses and perfusion specialists

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.

PRECONFERENCE PROGRAM

♥ WEDNESDAY, FEB. 13

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: Freidrichs 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



- 10:20 a.m. Experience with the Berlin Heart
Jon David Menteer, MD
- 10:40 a.m. Challenges and Limitations in Imaging the Heart While on ECMO or Mechanical Circulatory Support
Michael Quartermain, MD
- 11 a.m. Antithrombotic Therapy While on Mechanical Circulatory Support
Christina Vander Pluym, MD
- 11:20 a.m. Challenges and Solutions in Bridging the Pediatric Patient on Mechanical Circulatory Support to Heart Transplantation: Surgical Perspective
Jonathan Chen, MD
- 11:40 a.m. Challenges and Solutions in Bridging the Pediatric Patient on Mechanical Circulatory Support to Heart Transplantation: Transplant Cardiologist Perspective
Kurt Schumacher, MD
- Noon Lunch
- 12:20 p.m. Myocardial Remodelling in Mechanical Circulatory Support
Shelley Miyamoto, MD
- 12:40 p.m. Destination Therapy for Mechanical Circulatory Support in Pediatrics: Is It a Reality?
Angela Lorts, MD
- 1 p.m. Home: Outpatient Experience with Mechanical Circulatory Support in Pediatrics
Karen McCandless, MSN, CRNP
- 1:20 p.m. Resource Utilization for Pediatric VAD Use
Matthew O'Connor, MD
- 1:40 p.m. Unique Challenges in the Fontan Circulation: What Might Be the Solution?
Mark Rodefeld, MD
- 2 p.m. Case-based Scenarios in Mechanical Circulatory Support
Matthew O'Connor, MD; Jon David Menteer, MD; and Christina Vander Pluym, MD
- 3 p.m. Adjourn

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 Atrioventricular 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, CPN
- 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

CONFERENCE PROGRAM

Opening Plenary Session I: 4 – 6:50 p.m.

4 p.m. Opening Remarks – *Jack Rychik, MD*

Challenges and Opportunities: Tackling the Problem of ...

- 4:05 p.m. Optimizing Healthcare for Children in a Changing Environment: The Children's Hospital Association
Amy Knight
- 4:25 p.m. Bringing Personalized Medicine to Congenital Heart Care
James Priest, MD
- 4:45 p.m. Bringing "Artificial Intelligence" and Machine Learning into the Practice of Medicine
Amit Reches, PhD
- 5:05 p.m. Finding Solutions for a Challenging Condition: Neonatal Ebstein's Anomaly
Vaughn Starnes, MD
- 5:25 p.m. The Fontan Conundrum(s)
Jack Rychik, MD
- 5:45 p.m. The Difficult to Transplant Patient
Angela Lorts, MD
- 6:05 p.m. The Exponentially Growing ACHD Population: Gaps in Knowledge
David Celermajer, MD
- 6:25 p.m. Why Are Cardiac Professionals So Heartless When It Comes to Self Care?
Liz Crowe
- 6:50 p.m. Adjourn
- 7 p.m. Reception
- 8:30 p.m. Bonfire on the Beach!

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♥ 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

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



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

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

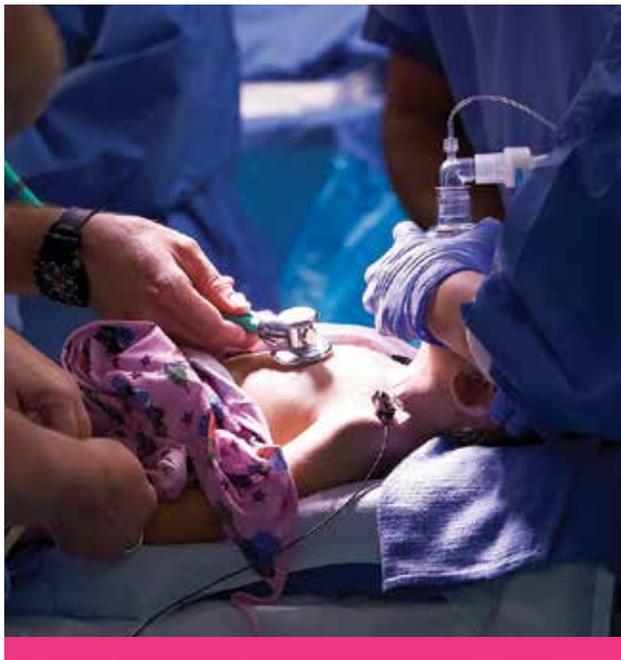
12:30 p.m. Intermediate and Long-term Outcomes
Yuli Kim, MD

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, CPNP
- 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-CFNP*
- 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

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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



- 6:45-7:45 a.m. **Sunrise Session III: It's All about IMAGE: 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
- 6:45-7:45 a.m. **Sunrise Session IV: Well, I've Never Seen This Before! Clinical Case Scenarios and Important Lessons Learned**
Jacqueline Kreutzer, MD; Daniel Penny, MD; Chitra Ravishankar, MD; and Adel Younoszai, MD
- 6:45-7:45 a.m. **Sunrise Session V: Nursing Sunrise Session: Vasoactive Medications**
Kathryn Dodds, MSN, CPNP; Stacy Reynolds, DNP, CPNP; Dione Paras, MSN, CPNP; and Sandra Staveski, PhD, CPNP

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

**HEART
R  N 5K**
CARING FOR KIDS' HEARTS



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

- 11 a.m. Alternative Anticoagulation for ECMO
Myke Federman, MD
- 11:20 a.m. Cardiohelp Use in Children: The CCHMC Experience
James Reagor, CCP
- 11:40 a.m. Cardiac ECMO: Challenges with Anticoagulation and Monitoring – *Andrew Costarino, MD*
- Noon Timing and Optimization for Separating from ECMO
Maryam Naim, MD
- 12:20 p.m. Practice Makes Perfect: Drills and Dimulation
Kim Delacruz, CCP
- 12:40 p.m. Faculty Panel Discussion Q & A
- 1 p.m. Adjourn

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, PhD

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

Plenary Session VII: 7 – Noon

Hypoplastic Left Heart Syndrome: 40 Years of Challenges, Opportunities & Solutions – Fetus to Adult

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



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