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# Biatrial Connection of Superior Vena Cava: Unusual Presentations of a Rare Disease in Two Children

*Sulafa M. Ali, FRCPCH, FACC; Abdelrahman Atya, MD; Noha Karadawi, MD, MRCPCH; Amna Mamoun, MD*

## Abstract

Biatrial connection of the superior vena cava is a rare congenital anomaly leading to cyanosis and consequent complications. Diagnosis can be missed on routine echocardiography. We describe two children with this defect, one presented with early onset of heart failure and the second with a brain abscess. Diagnosis was missed on the first echocardiogram for both patients. The defect was associated with narrowing of the right superior vena cava to right atrium opening leading to predominant flow to the left atrium in both patients. Contrast echocardiogram confirmed the diagnosis in both cases. Medical and surgical management issues are discussed.

## Introduction

Anomalous connections of systemic veins are rare congenital heart defects. Biatrial right superior vena cava (RSCV) connection had been first described by postmortem examination in 1914.<sup>1</sup> In the 1960s to 1980s few cases were described, mostly in adults.<sup>2,3,4,5</sup> Up to 2020, only 12 cases (with six pediatric patients) had been described with this diagnosis.<sup>6</sup> The defect is typically located at the common wall that separates the RSVC from the right upper pulmonary vein, the area where sinus venosus atrial septal defect (ASD) is located. As the defect may overlap or co-exist with sinus venosus ASD, its true incidence may be difficult to identify. The most common presentation of this defect is unexplained cyanosis which can be mild leading to delay in diagnosis up to adulthood. Echocardiography (echo) diagnosis can be challenging, and routine transthoracic echo may miss this lesion. We describe two cases of biatrial connection of RSVC that were missed on the initial echo examination. Rare associations are described.

## Case 1

A 21-month-old boy was referred to our clinic with shortness of breath since the age of four months. He was initially seen by a pediatric cardiologist and diagnosed as having sinus venosus ASD. Physical examination revealed tachypnea, a respiratory rate of 40/minute with intercostal retractions and Harrison's sulci. The heart rate was 120 beats/minute. There were no dysmorphic features. His weight was 8.5K g (four standard deviations below the mean for his age) and oxygen saturation was 87% in room air. The left ventricle apex was felt at the 5<sup>th</sup> intercostal space lateral to the mid clavicular line, and there was a positive

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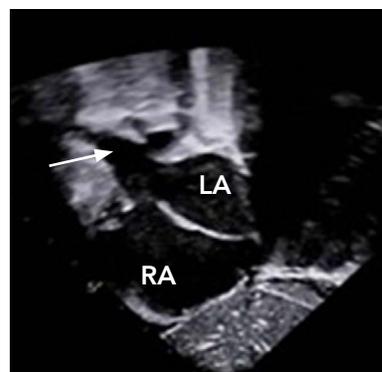
right ventricle heave. On auscultation, the first heart sound was normal and the second was loud. There was an ejection systolic murmur grade II/VI heard best at the left second intercostal space.

Chest x-ray showed cardiomegaly with RA and right ventricle enlargement and pulmonary plethora. Electrocardiogram showed right ventricle enlargement of volume overload pattern. Echo showed situs solitus, atrioventricular and ventriculoarterial concordance. There was biatrial connection of the RSVC, mostly to the left atrium (LA). The RSVC/right atrium (RA) communication was narrow, measuring 5 mm, while the left atrium (LA) communication was 9 mm with a mean Doppler gradient of 0.8 mmHg. There was an ASD of sinus venosus type measuring 10 mm with left-to-right shunt (**Figure 1**). The right upper pulmonary vein drained to the RSVC; the three other pulmonary veins drained normally to LA. The right ventricle was dilated with paradoxical septal motion. The LA was mildly dilated (LA: aorta ratio 1.5:1). There was no left SVC, the other anatomy and function were unremarkable.

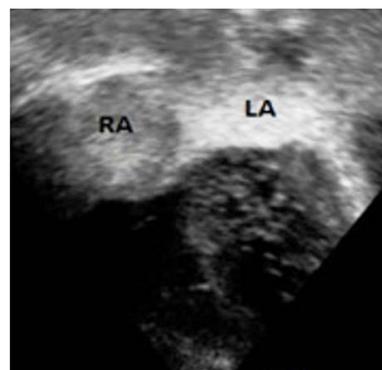
An echo contrast study using agitated saline in the left cubital vein showed simultaneous appearance of the bubbles in both atria, LA having a denser contrast than RA and earlier filling of the left ventricle was demonstrated (**Figure 2**). The case was referred for discussion with the surgeon.

**Case 2**

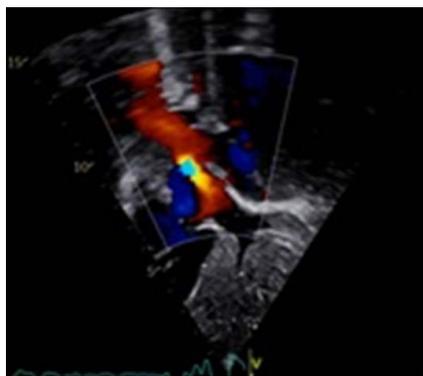
A five-year-old boy, presented to the pediatrician with high grade fever and vomiting; brain computed tomography scan showed



**FIGURE 1**  
Subcostal sagittal (bicaval) view of Patient 1 showing a sinus venosus ASD, RSVC (arrow) opening into both atria with narrow RSVC/RA junction. ASD: Atrial Septal Defect. RSVC: Right Superior Vena Cava. RA: Right Atrium.



**FIGURE 2**  
Four chamber view of Patient 1 showing agitated saline injection into the left cubital vein with simultaneous contrast appearance in both atria (denser in LA and showing in left ventricle). LA: Left Atrium. RA: Right Atrium.



**FIGURE 3**  
Subcostal sagittal (bicaval) view with color Doppler of Patient 2 showing RSVC (arrow) opening into both atria with narrower RSVC/RA junction compared with Patient 1. RSVC: Right Superior Vena Cava. RA: Right Atrium.

a brain abscess which was drained surgically. He was noted to be clubbed and cyanosed and referred for cardiac assessment. He did not experience any cardiovascular symptoms. Physical examination revealed no dysmorphic features and mild clubbing; the weight was 16 Kg (at the 5<sup>th</sup> percentile for his age) and oxygen saturation was 85% in room air.

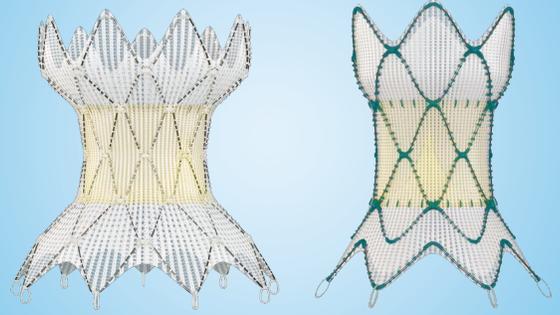
Echo was initially reported as normal, suspicion of pulmonary arterio-venous malformation led to performing a contrast echo study using agitated saline which revealed bubbles simultaneously filling both atria. Repeated echo revealed biatrial drainage of RSVC which mainly drains to LA. The RSVC to RA communication was stenosed with a mean gradient of 3.8 mmHg (**Figure 3**). No clear ASD was seen. The right upper pulmonary vein was seen draining to the RSVC; the other three pulmonary veins were seen draining to the LA. LA was mildly dilated (LA: aorta ratio 1.5:1). There was no left SVC and the other anatomy and function were normal. Chest X-ray and electrocardiogram were normal. The case was referred for surgical opinion.

**Discussion**

Biatrial drainage of RSVC has been described as a rare anomaly; more cases have recently been reported due to improvement in imaging modalities such as cardiac contrast-enhanced computed tomography and magnetic resonance. With improving echo techniques antenatal diagnosis has also been described.<sup>6,7</sup> However, as evident from our cases, transthoracic echo can miss the diagnosis and operators need to have a high level of suspicion, particularly if the cause of cyanosis is not obvious.

Although in sinus venosus ASD the RSVC overrides the atrial septum, the blood flow is usually directed to the RA; therefore, there is no cyanosis in this condition. In the current two patients there is narrowing of the RSVC/RA opening leading to predominant shunting of RSVC blood into the LA, and subsequently, desaturation. Similar findings had been described by Van Praagh.<sup>9</sup> If the RSVC to RA orifice is atretic, then the RSVC is directly connected to LA leading to a similar hemodynamic effect. This later condition had been reported in 45 cases including 26 children.<sup>6</sup>

Our first patient represents a rare occasion of early onset of heart failure in the setting of biatrial RSVC and sinus venosus ASD. In the latter lesion, heart failure typically occurs in young adults



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**Before use:** Exposure to glutaraldehyde may cause irritation of the skin, eyes, nose, and throat. Avoid prolonged or repeated exposure to the chemical vapor. Use only with adequate ventilation. If skin contact occurs, immediately flush the affected area with water (for a minimum of 15 minutes) and seek medical attention immediately. The TPV and the glutaraldehyde storage solution are sterile. The outside of the TPV container is nonsterile and must not be placed in the sterile field. The TPV and DCS should be used only in a sterile catheterization laboratory (cath lab) environment. Ensure that sterile technique is used at all times. Strictly follow the TPV rinsing procedure. For TPV 25: Ensure that all green sutures have been removed from the attachment suture loops on the TPV before loading onto the DCS. Prevent contamination of the TPV, its storage solution, and the DCS with glove powder. Verify the orientation of the TPV before loading it onto the DCS. The inflow end of the TPV

with attachment suture loops must be loaded first. Do not place excessive pressure on the TPV during loading. Inspect the sealed DCS packaging before opening. If the seal is broken or the packaging has been damaged, sterility cannot be assured. Proper functioning of the DCS depends on its integrity. Use caution when handling the DCS. Damage may result from kinking, stretching, or forceful wiping of the DCS. This DCS is not recommended to be used for pressure measurement or delivery of fluids. Carefully flush the DCS and maintain tight DCS connections to avoid the introduction of air bubbles.

**During use:** The TPV segment is rigid and may make navigation through vessels difficult. Do not advance any portion of the DCS under resistance. Identify the cause of resistance using fluoroscopy and take appropriate action to remedy the problem before continuing to advance the DCS. Careful management of the guidewire is recommended to avoid dislodgement of the TPV during DCS removal. Once deployment is initiated, retrieval of the TPV from the patient is not recommended. Retrieval of a partially deployed valve may cause mechanical failure of the delivery catheter system or may cause injury to the patient. Refer to the section below for a list of potential adverse events associated with Harmony TPV implantation. During deployment, the DCS can be advanced or withdrawn prior to the outflow struts protruding from the capsule. Once the TPV struts contact the anatomy during deployment, it is not recommended to reposition the device. Advancing the catheter forward once the TPV struts make contact with the anatomy may lead to an undesired deployment or may cause damage to or failure of the TPV and injury to the patient. Refer to the section below for a list of potential adverse events associated with the Harmony TPV implantation. Physicians should use judgment when considering repositioning of the TPV (for example, using a snare or forceps) once deployment is complete. Repositioning the bioprosthesis is not recommended, except in cases where imminent serious harm or death is possible (for example, occlusion of the main, left, or right pulmonary artery). Repositioning of a deployed valve may cause damage to or failure of the TPV and injury to the patient. Refer to the section below for a list of potential adverse events associated with the Harmony TPV implantation. Ensure the capsule is closed before DCS removal. If increased resistance is encountered when removing the DCS through the introducer sheath, do not force passage. Increased resistance may indicate a problem and forced passage may result in damage to the device and harm to the patient. If the cause of resistance cannot be determined or corrected, remove the DCS and introducer sheath as a single unit over the guidewire, and inspect the DCS and confirm that it is complete. If there is a risk of coronary artery compression, assess the risk and take the necessary precautions. Endocarditis is a potential adverse event associated with all bioprosthetic valves. Patients should make their healthcare providers aware that they have a bioprosthetic valve before any procedure. Post-procedure, administer appropriate antibiotic prophylaxis as needed for patients at risk for prosthetic valve infection and endocarditis. Prophylactic antibiotic therapy is recommended for patients receiving a TPV before undergoing dental procedures. Post-procedure, administer anticoagulation and/or antiplatelet therapy per physician/clinical judgment and/or institutional protocol. Excessive contrast media may cause renal failure. Preprocedure, measure the patient's creatinine level. During the procedure, monitor contrast media usage. Conduct the procedure under fluoroscopy. Fluoroscopic procedures are associated with the risk of radiation damage to the skin, which may be painful, disfiguring, and long term.

## Potential Adverse Events

Potential risks associated with the implantation of the Harmony TPV may include, but are not limited to, the following: ■ death ■ valve dysfunction ■ tissue deterioration ■ hematoma ■ heart failure ■ cerebrovascular incident ■ perforation ■ rupture of the right ventricular outflow tract (RVOT) ■ compression of the aortic root ■ compression of the coronary arteries ■ sepsis ■ pseudoaneurysm ■ erosion ■ stent fracture ■ arrhythmias ■ device embolization or migration ■ pulmonary embolism ■ occlusion of a pulmonary artery ■ laceration or rupture of blood vessels ■ device misorientation or misplacement ■ valve deterioration ■ regurgitation through an incompetent valve ■ physical or chemical implant deterioration ■ paravalvular leak ■ valve dysfunction leading to hemodynamic compromise ■ residual or increasing transvalvular gradients ■ progressive stenosis and obstruction of the implant ■ hemorrhage ■ endocarditis ■ thromboembolism ■ thrombosis ■ thrombus ■ intrinsic and extrinsic calcification ■ bleeding ■ bleeding diathesis due to anticoagulant use ■ fever ■ pain at the catheterization site ■ allergic reaction to contrast agents ■ infection ■ progressive pulmonary hypertension ■ progressive neointimal thickening and peeling ■ leaflet thickening ■ hemolysis. General surgical risks applicable to transcatheter pulmonary valve implantation: ■ abnormal lab values (including electrolyte imbalance and elevated creatinine) ■ allergic reaction to antiplatelet agents, contrast medium, or anesthesia ■ exposure to radiation through fluoroscopy and angiography ■ permanent disability.

Please reference the Harmony TPV system instructions for use for more information regarding indications, warnings, precautions, and potential adverse events.

**Caution:** Federal law (USA) restricts these devices to the sale by or on the order of a physician.

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where right ventricle volume overload is poorly tolerated. This early onset of heart failure could be explained by the volume overload of the left side of the heart caused by the RSVC adding to the right-side volume overload due to ASD. The presence of heart failure and low saturation in infants with ASD should alert the cardiologist to the presence of other lesions such as anomalous pulmonary or systemic venous drainage.

Brain abscess is a well-known complication of cyanotic heart disease. This complication had been reported in adult patients with biatrial SVC connection; however, it is exceedingly rare in children and, to our knowledge, only one case reported.<sup>6</sup> In our patient, the brain abscess was the presenting feature that led to the diagnosis, emphasizing the role of careful examination and detailed echo for such patients.

Echo diagnosis of biatrial RSVC needs a high index of suspicion and careful examination of subcostal bicaval view. If a standard echo is negative, a contrast study should be considered in patients with unexplained low oxygen saturation. Agitated saline is sensitive and has a documented role in diagnosis of anomalous systemic veins and other conditions such as unroofed coronary sinus.<sup>10</sup> Cardiac computed tomography and magnetic resonance imaging can delineate the detailed anatomy of the SVC and pulmonary veins,<sup>7</sup> their role in diagnosis supersedes invasive tools such as cardiac catheterization which is reserved for hemodynamic assessment of older patients.

Important clinical implications of biatrial RSVC include the need to avoid intravenous infusions using upper limb veins in order to prevent systemic thrombo embolism. In addition, an abnormal course during systemic venous cannulation or pacemaker insertion can lead to inadvertent positioning if the diagnosis was not established prior to the procedure.

The surgical management of this condition aims to redirect the pulmonary veins to the LA and the RSVC to the RA without causing obstruction to flow. Many techniques had been described, most commonly involving transection of the RSVC and anastomosing it to the RA appendage (Warden's procedure) as described for repair of superior sinus venosus defects with a high placement of the anomalously draining pulmonary veins. For a group of 23 patients who underwent surgical repair, the operative mortality remains high at 8.6%.<sup>6</sup> Recently, closure of sinus venosus ASD using covered stents had been introduced with acceptable results, which can potentially be applied to our first patient.<sup>11</sup>

## Conclusion

We described two rare presentations: early onset of heart failure and brain abscess in two children with biatrial connection of RSVC and dominant RSVC to LA drainage emphasizing the need for a high index of suspicion in cyanosed patients and the role of contrast echo in diagnosis.

## Learning Points

- Detailed echo including careful subcostal sweeping in patients with low O<sub>2</sub> saturation
- Agitated saline contrast echo has a diagnostic in cases where low O<sub>2</sub> saturation is unexplained
- Brain abscess can be secondary to rare congenital anomalies such as anomalous systemic venous drainage

**Conflict of Interest:** None declared

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# The PICS Society Advocacy Program: Power in Numbers! Part 3

*Bharat Dalvi, MD, DM, FPICS; Natalie Poli, Ed.S; Kamel Shibbani, MD; Norm Linsky, MPA, MA*

As a global community dedicated to minimally invasive treatment of Congenital Heart Disease (CHD), do we have shared policy goals regardless of where we live and work? If so, how can we achieve those goals? As Dr. Shibbani says, “Do we have **power in numbers?**”

In Part 1 (August 2021, CCT) Dr. Alejandro Peirone (Argentina) started our global dialogue about ADVOCACY—how we can advocate for safe, effective, affordable patient care. In Part 2 (September 2021, CCT) Drs. Ziyad Hijazi (Qatar) and John Cheatham (USA) continued the dialogue along with PICS Senior Patient Advocate Ms. Natalie Poli (USA). This month we continue our series through an interview with Dr. Bharat Dalvi (Mumbai, India), a PICS Board member and global leader. (Next month we conclude this series with an interview with another global leader, Dr. Hideshi Tomita in Tokyo, Japan).

**Dr. Shibbani:** What are the most important advocacy issues facing you and your colleagues in India? Are there ways that PICS can help achieve them?

**Dr. Dalvi:** One of the most pressing issues in India is the limited availability of patient care at all levels from primary to tertiary. We have a huge gap between supply and demand, with far too few centers to meet demand. In India 250,000 to 300,000 babies are born annually with CHD. Of those, 80,000-100,000 need some form of intervention (transcatheter/surgical), but our current socioeconomic environment allows for only about 25,000-30,000 to be treated; that’s a painfully small number. Economics and affordability are the main issues (apart from social and educational factors) which delay or deny necessary treatment. This is true throughout the developing world.

**“My personal feeling is that globally 90% of the resources are used to treat 10% of the population. Organizations such as PICS should address this: How can we cut costs without sacrificing quality? We have to evolve strategies and protocols that are as safe as anywhere else in the world, but are less expensive. The hard reality: you can’t pretend to have money you don’t have.” —Bharat Dalvi, MD, DM, FPICS**

We have much to do in terms of education about CHD in three areas. First, our primary care colleagues often are not trained to detect CHD at an early age; this can be changed with continuing medical education programs emphasizing various protocols for detecting CHDs in newborns and early infancy. We must also improve awareness that we can treat CHD far more effectively and safely than in the past, with the majority going on to live productive and fruitful lives. This is especially critical for primary care providers in remote areas. Second, we must train more pediatric cardiologists, nurses, technicians, intensive care specialists, anesthesiologists and surgeons in India. Dr. Shibbani, you noted the 2021 PICS Symposium included a new program for interventional fellows and early career doctors. I am encouraged that the program was well-received and will be offered

again in 2022. As a professional society we must continue training via every avenue possible. Partnering with national societies to train medical providers throughout their careers is so important. I envision selected PICS faculty teaming with faculty in my country to offer such programming online and in-person. [Editor’s Note: Subsequent to this interview, Dr. Dalvi created a highly successful partnership with the Pediatric Cardiac Society of India (PCSI) and provided such a joint program during the PCSI’s Annual Congress in October 2021. Thank you to PCSI Congress Chair Prof. Ramakrishna and his distinguished team! Details in a future CCT column.] Third, we must stress the importance of public education. Early detection is so important to improve quality of life and life expectancy. Too often in the “olden days” a diagnosis of CHD led to doctors advising there was little they could do. Now there **is** much we can do—the word needs to get out to the public and to those who hold the purse strings.

**Mrs. Poli:** Dr. Dalvi you are so right, and I was so lucky. My CHD was undetected for many years. It wasn’t until I had a stroke as an adult that I was properly treated. Thank you to my own physicians Drs. Ziyad Hijazi and Cliff Kavinsky! Creating awareness is a global issue. Early detection and treatment are vital everywhere in the world.

**Dr. Dalvi:** Thank you Natalie. People like you are the role models. This is one of the best ways to spread awareness. No matter how hard we as physicians try, a patient advocate can be so critical in communicating with patients, families and the public. When patients tell their stories and successes, the impact is so real.

**Dr. Shibbani:** Let’s address the other issue you raised, not enough specialists in the developing world. Advocating for change is something PICS could address in partnership with PCSI. Many PICS members

participate in medical missions to treat patients and train local providers in regions lacking access to specialized care. Is this an area where PICS can help?

**Dr. Dalvi:** Yes! The need is great as is our collective ability to help. When I began my practice in 1994, there were perhaps five pediatric cardiologists in the entire country. Now we have about 500; progress, but for a population of 1.4 billion there are still too few. PICS can help. First, it can support efforts of PCSI and other organizations to plan medical missions to regions in need. Second, PICS can partner with those organizations to increase the knowledge base amongst pediatric cardiologists in India. This will give them expanded perspectives into patient management



## Cardiologist Needed for an Adult Congenital Heart Disease Faculty Position at Cincinnati Children's

The Heart Institute (HI) at Cincinnati Children's Hospital Medical Center (CCHMC) seeks applications for a BE/BC Pediatric Cardiologist at the Assistant or Associate Professor level. The position will be clinically focused as part of the non-invasive imaging subsection with responsibilities primarily in echocardiography with fetal echocardiography responsibilities possible if desired by the candidate.

The HI is an internationally recognized academic center of excellence for Pediatric (congenital and acquired) and Adult Congenital Cardiac Care, and clinical and basic science research. The HI incorporates the Divisions of Congenital Heart Disease, Cardiothoracic Surgery and Molecular Cardiovascular Biology. It offers the full range of Pediatric Cardiac services within a free-standing not-for-profit tertiary care medical center. The HI also serves to train categorical Pediatric Cardiology and sub-specialty fellows in all areas of congenital heart disease practice (including 2 Advanced Imaging fellows). Academic appointment within CCHMC is through the Department of Pediatrics at the University of Cincinnati College of Medicine.

The Echo lab includes 13 imaging faculty and 22 cardiac sonographers and performs over 15,000 transthoracic, 500 transesophageal and 2500 fetal echocardiograms annually. The facility includes a state-of-the-art reading room as well as the necessary technology to perform all current advanced imaging techniques.

**The applicant would be expected to participate in clinical service including (but not limited to):**

- Perform/interpret transthoracic and transesophageal echocardiograms.
- Perform a single out-patient clinic on a weekly basis
- Provide limited periods of in-patient and/or consult service coverage
- Participate in all HI clinical and management conferences
- Perform teaching and instruction commensurate with the training mission of the HI/CCHMC

The Heart Institute and the Non-invasive Imaging Service pride themselves on excellent clinical outcomes. The acceptable candidate would be expected to maintain similar high standards of clinical service.

**Skills & Competencies**

- Knowledge of growth and development
- Understands and support family-centered care
- Professional knowledge and clinical ability sufficient to provide evaluation and treatment of complex patients in one or more specialty areas
- Knowledge of pathophysiology and pharmacology
- Knowledge and skill in patient and/or family education
- Understanding and showing respect and appreciation for the uniqueness of all individuals; leveraging differences in others' perspectives and ideas; appreciating cultural differences and adjusting one's approach to successfully integrate with others who are different from oneself
- Strong organizational and project management skills to handle projects independently.
- Excellent verbal, written and/or interpersonal communication skills

**Required**

- MD, DO, or equivalent degree
- Current active medical license issued by the State of Ohio or eligible for license
- Appropriate medical credentialing through the Medical Staff Services offices
- Completion of all required pre-employment activities
- Assistant or Associate Professor appointment or eligibility required

**Preferred**

- Board certification

Interested candidates should submit a cover letter of interest and CV to:  
**Andrew Redington, MD, Co-Director**  
The Heart Institute, Cincinnati Children's Hospital Medical Center  
[Andrew.Redington@cchmc.org](mailto:Andrew.Redington@cchmc.org)



and build relationships with peers globally. One thought among many: include India-based fellows and early career doctors in the annual PICS Fellows/Early Career Course. Giving them exposure to what is possible, what is excellence, learning from experienced providers would be invaluable to physicians-in-training.

**Dr. Shibbani:** What would be topics we can advocate for globally?

**Dr. Dalvi:** My personal feeling is that globally 90% of the resources are used to treat 10% of the population. This leaves us with 10% of the resources to care for 90% of the population. Organizations such as PICS should address this: how can we serve the lower part of the economic/access pyramid? How can we cut costs without sacrificing quality? The hard reality: you can't pretend to have money you don't have.

We have to evolve strategies and protocols that are as safe as anywhere else in the world, but are less expensive. That requires a lot of thinking and hard decisions. People like me who have grown up in this challenging environment have insights into how we can save money without sacrificing excellent care or causing infection.

In much of the developing world, of necessity there are protocols for identifying certain items that can be fully sterilized and re-used, with similar protocols to discard items that are one-time use. In many parts of the world, there simply is no other choice. This is a controversial area, which should be carefully explored through open dialogue, rigorous research and equally rigorous outcomes tracking.

There are many items that must never be re-used no matter how well re-sterilized. For certain other procedures this may be possible if the appropriate controls are in place. If the goal is to improve access to safe, effective care, there are many countries where the situation is dire. Guidance from PICS as a society with global standing could make a difference to hundreds of thousands in underserved regions.

**Dr. Shibbani:** In that context, what are your thoughts regarding clinical guidelines?

**Dr. Dalvi:** In the developing world we work hard to make decisions based on textbooks, journals and guidelines based on those materials. Authors frequently come from backgrounds with more resources than in the developing world. PICS has made important steps to diversify its leadership and committees—this is welcome and will continue. At the doctor-patient level, if a patient comes to me who has the resources, has researched the developed world literature and wants an expensive validated procedure, I have no problem with that. But if another patient comes to me and may have to spend his or her entire life savings on a procedure where less expensive, highly effective alternative treatments are available, a conversation needs to happen. This is the reality we face in our hospitals today.

**Dr. Shibbani:** I have seen guidelines in the infectious diseases area where they factored in the difficult economic realities and choices based on whether one is in a developed vs a developing country. It is not an easy area.

**Dr. Dalvi:** That's true and important in terms of developing guidance as to what practices should be minimum mandatory standards everywhere, and others which are state of the art. I am glad our community is starting the dialogue; we have much work ahead on this.

**Mrs. Poli:** Thank you so much Dr. Dalvi. How do you recommend we move forward?

**Dr. Dalvi:** In pursuing advocacy goals and related matters, partnership with respective national societies will continue to be vital and win-win. I have been in touch with the Pediatric Cardiac Society of India which agrees completely. We should link websites, share educational materials, be represented on

one another's committees and writing groups, and jointly speak out on advocacy matters of mutual importance. In doing so, we can set the bar for partnerships with other national societies.

When a new society comes into being—and there are many such societies, most from North America and Western Europe—their emphasis, and I'm not being critical—is naturally on those regions. PICS on the other hand is fully global. Dr. Hijazi himself (and the entire PICS leadership) is completely dedicated to global health. Because of that, we now have a platform to bring that same global philosophy to the forefront addressing the challenges we discussed today. Natalie, as you said, we are doing this across all ages, socioeconomic strata, colors, genders and cultures. That should always be our focus and our goal.

**Mrs. Poli:** I am so grateful to my own care team. If it weren't for doctors like you—and your superb nurses and technologists—I wouldn't be here today! I will never forget that. Thank you!



**BHARAT DALVI, MD, DM, FPICS**

Consultant Cardiologist  
Glenmark Cardiac Centre  
Sir H N Reliance Foundation Hospital  
Mumbai, India



**NATALIE POLI, Ed.S**

*PICS Society Senior Patient Advocate*  
Public Education Professional  
Successfully treated interventional for CHD, 2006  
Mrs. Midwest International 2022  
Former Captain of the NBA Chicago Bulls Dance Team



**KAMEL SHIBBANI, MD**

Advanced Pediatric Cardiology Fellow  
University of Iowa  
Iowa City, IA, USA



**NORM LINSKY, MPA, MA**

PICS Society Executive Director  
Washington, DC, USA  
[nlinsky@CHDinterventions.org](mailto:nlinsky@CHDinterventions.org)



# Director for Pediatric Heart Failure, Transplant and Cardiomyopathy

## New York City, New York

The Department of Pediatrics and the Division of Cardiology at the Columbia University Irving Medical Center (CUIMC)/Morgan Stanley Children's Hospital (MSCH) NewYork-Presbyterian Hospital (NYPH) are recruiting a new Director for Pediatric Heart Failure, Transplant and Cardiomyopathy to lead the rapidly expanding pediatric heart failure, mechanical support and pediatric heart transplant programs at CUIMC/MSCH. The CUIMC Pediatric Heart Failure/Transplant/Cardiomyopathy Program is one of the busiest in the world, with a very high volume of transplantations and VAD implantations performed every year. The new Director will advance this program further, bringing their expertise and academic vision to this talented team. The Director will be responsible for the medical direction, in collaboration with the Division Chief and surgical director, of the pediatric cardiology heart failure/mechanical support/transplant inpatient service, and staff pediatric cardiology heart failure/transplant outpatient clinics. It is expected that this individual will serve a key leadership role within the MSCH Heart Center. Appointment will be made at the Associate or Full Professor.

The Division of Pediatric Cardiology at Columbia University employs 40 full-time physicians in addition to 10 nurse practitioners, with 15 categorical pediatric cardiology fellows as well as 2-3 advanced fellows every year. Our Heart Center includes four congenital cardiothoracic surgeons, led by world-renowned Dr. Emile Bacha. The MSCH Heart Center also has a dedicated pediatric anesthesiology team, a 32-bed CICU which includes a 17-bed neonatal cardiac ICU, and a 22-bed step-down unit. The Columbia/MSCH Heart Center is consistently ranked in the top 10-15 programs nationally, and is one of the top 5 programs nationally in terms of surgical and catheter-based volumes.

**Required qualifications include:**

- Medical Degree
- NY Licensed or eligible for a NY medical license
- Board certification in Pediatrics and subspecialty certification in Pediatric Cardiology; including formal clinical training or adequate experience in heart failure, mechanical support and transplant
- UNOS certification
- An interest, commitment and experience in teaching and research is essential (minimal 20% time)
- Advanced 4th year pediatric fellowship training and a minimum five years' practice experience preferred
- Previous experience directing a pediatric heart transplant program preferred
- Applicant must have all requirements met by time of hire

**Expected duties include:**

- Medical Director, Pediatric Heart Failure, Heart Transplantation, Ventricular Assist Device Program: responsible for all aspects of the Program's development, administration and clinical activities. You will work with the hospital administration, the Heart Center, and the Department in optimizing its structure, fiscal status, and administrative organization and clinical outcomes. You will have administrative oversight of the program in collaboration with the cardiology division chief and the chief of cardiac surgery.
- Heart Failure/Transplant/Assist Device Program Clinical responsibilities: Inpatient consultation in the ICU and CICU, mechanical assist oversight, and outpatient clinics. You will oversee data management for the program's clinical and financial activities including collection, analysis, and presentation. You will lead and encourage all academic aspects of the program and its members.
- Inpatient Cardiology Service: You will be a member of the inpatient cardiology service along with approximately 6 other pediatric cardiologists. The service covers patients across cardiac floors and HFTx patients will be located across multiple floors. The outpatient weekday service will entail approximately 1-2 outpatient clinics/week; inpatient service will entail approximately 10-12 weeks of service per year.
- In conjunction with the Cardiology Division Chief, the Chief of Congenital Heart Surgery, and hospital leadership, further the vision and plans for management of heart failure-VAD-OHT patients in the cardiac intensive care unit. This vision may encompass the creation of a dedicated pediatric heart failure CICU.

**For more information contact:**

Christopher J. Petit, MD  
Welton M. Gersony, Professor of Pediatrics  
Columbia University Vagelos College of Physicians and Surgeons  
[cjp2196@columbia.edu](mailto:cjp2196@columbia.edu)

**Application Requirements****Documents:**

- Curriculum Vitae - Your most recently updated C.V.
- Cover Letter
- Statement of Research
- Statement of Teaching
- Statement of Contributions to Diversity - Please see the following page for more details: <https://diversity.ucsf.edu/contrib>

**References:**

- 3 required (contact information only)



# A Tribute to Gary

*Erwin Oechslin, MD; Jack Colman, MD; Rafa Alonso, MD*

Gary D. Webb, a jewel in the crown of Canadian cardiology, a giant in the specialty of Adult Congenital Heart Disease that he did so much to establish, passed away October 19, 2021, in Philadelphia.

Gary graduated from McGill, and after internship at the Royal Victoria Hospital, came to Toronto in 1968 for internal medicine and cardiology training, followed by a staff position at The Wellesley Hospital, and then at TGH.

Among his early responsibilities, he was director of post-graduate training in cardiology. He joined Peter McLaughlin and Peter Liu in the Adult Congenital Heart Disease (ACHD) program (founded in 1959), and by 1986 took over as its Director, a position he held till 2004, establishing a strong foundation for what became one of the largest and most influential programs in the world.

Gary either led or played a major role in essentially all the early international conferences and guideline committees that shaped the future of ACHD, including the first CCS Consensus Conference on Management of ACHD, published in 1996, for which he made masterful early use of his namesake, the World Wide Web, to develop Canadian guidelines with substantial international input without a single face-to-face meeting. Among his many accomplishments, he was the founding President of the Canadian Adult Congenital Heart (CACH) Network and of the International Society for Adult Congenital Heart Disease (ISACHD), he edited one of the most important textbooks in ACHD 'Diagnosis and Management of Adult Congenital Heart Disease' now in its 4th edition, he established the ACHD Learning Center, now part of Heart University, and he created and was editor-in-chief of the Congenital Heart International Professionals' (CHiP) Network.

In 2004 he left Toronto for Philadelphia, following his wife Anne Phillips, who took a senior executive position in the pharmaceutical industry. He was director of the ACHD program at Penn until 2009 when he moved on to establish the ACHD program at Cincinnati Children's Hospital Heart Institute. In 2017 he reactivated his Toronto appointment, and closed his clinical career at TGH, again seeing Toronto ACHD patients and teaching Toronto ACHD fellows.

Gary has been one of the pre-eminent pioneers in ACHD, a young subspecialty that owes much of its development to his personal vision and efforts. His national and international reputation reflects the global impact of his leadership. He has been a global authority in ACHD clinical care, in guideline development, in knowledge transmission, and in creating an enduring global network of like-minded individuals working towards the goal of improved understanding of ACHD and improved care for those born with this life-long chronic condition. The future of the global ACHD community is built on his legacy.

The Toronto ACHD group is planning to create a Gary Webb Fund for Education in ACHD. More details will be sent for those who want to contribute once they are available.



*This tribute was originally published by Heart University. CCT thanks Heart University and the authors, Drs. Erwin Oechslin, Jack Colman and Rafa Alonso, for allowing CCT to share their heartfelt tribute with our readers.*

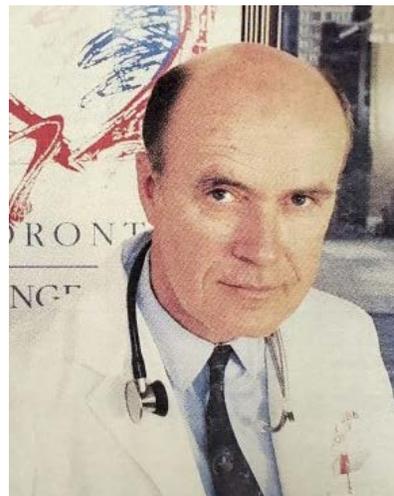
# Obituary for Gary Douglas Webb, MD, FRCPC, FACC

Gary Douglas Webb of Radnor, PA, passed away on October 19, 2021.

Born January 3, 1943 in Montreal, Quebec, he was the son of the late John Douglas Webb and the late Jeannie (Penny) Hardie Penman.

He leaves behind the love of his life and adoring wife of 41 years, Anne Michelle Phillips. He was the much-loved father of Lindsay (Stephen), Geoffrey (deceased July 1, 2017 (Jacqueline), Laura (Adam), Natalie (Quinn), brother to Blair (Linda), Barbara (Steve, deceased 2020) and Ross (deceased 1978). He was also a beloved fur father of Butters, Bueller and Tripp. He passed away at home surrounded by his family after a valiant battle with brain cancer.

Gary graduated from McGill University in Montreal and after an internship at Royal Victoria Hospital he came to Toronto in 1968 for internal medicine and cardiology training. He had staff positions first at Wellesley Hospital and then at Toronto General Hospital. Among his early responsibilities he was director of post grad training in Cardiology. He joined the Adult Congenital Heart Disease Program (ACHD) and took over as Director in 1986, a position he held until 2004, establishing a strong foundation of what became one of the largest and most influential programs in the world.



Gary either led or played a major role in essentially all of the early international conferences and guideline committees that shaped the future of ACHD. He also edited one of the most important textbooks in ACHD, now in the 4th edition. He established the ACHD Learning Centre, now part of Heart University, and was Editor-in-Chief of the Congenital Heart International Professionals' (CHiP) Network.

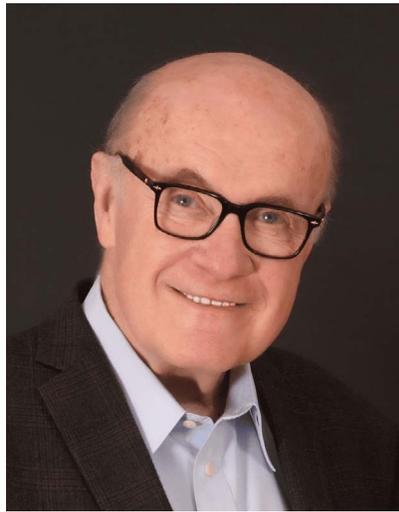
In 2004, Gary left Toronto for Philadelphia, following his wife Anne, who took a senior executive position in the pharmaceutical industry. He was the director of ACHD program at University of Pennsylvania until 2009, and then he moved on to establish the ACHD program at Cincinnati Children's Hospital. In 2017, he reactivated his Toronto appointment, and began again seeing Toronto ACHD patients and teaching Toronto ACHD followers.

Gary has been one of the pre-eminent pioneers in ACHD, a young subspecialty that owes much of its development to his personal vision and efforts. His national and international reputation reflect the global impact of his leadership. The future of the global ACHD community is built on his legacy.

While Gary had an incredibly impressive career, his greatest source of pride and sense of achievement came from his family, both immediate and extended. His world was his family, and he was the bedrock of it.



His two constant mantras to his family were "Work Hard, Play Hard" and "Be Good to Yourself, Be Good to Others."



His focus was on time spent together, memories of wonderful family trips and extended family holidays on Shadow Lake and Gibson Lake in Ontario. He and his family returned to Toronto every Christmas to see both sides of his family, whom he loved more than anything. He was thrilled to just hang out, watch sports and movies, eat great soups, enjoy fabulous food and laugh. He also loved to watch his kids 'and nephews' sporting events (hockey, rowing and lacrosse). He was an amazing hockey player growing up, and he loved to see how the kids and their teams progressed year over year.

Gary loved fun, and all the kids loved him. He was like the Pied Piper – kids followed him blindly on whatever adventure he proposed – at the drop of a hat he'd take them go-karting, tubing on the lake and white-water rafting, "driving" the car (on his lap), rides on top of his shoulders, dizzying flips in his arms, all accentuated by his wild exclamations of "Hola-Bola" which he used as frequently as he possibly could.

# CHiP NETWORK

CONGENITAL HEART INTERNATIONAL PROFESSIONALS

Gary was a devoted husband, father and the quintessential family man. It brought him great joy to walk his daughter Laura down the aisle on April 10<sup>th</sup>, 2021 at her wedding to Adam. He loved family parties and the communal Sunday night family dinner was a tradition that continued until he passed.

Gary's family was the pride and joy of his life. He loved to laugh and had a great sense of humor. Anne and Gary loved and laughed together throughout their wonderful life together.



Congenital Cardiology Today (CCT) and the CHiP Network have been long time partners. They began working together in 2013 when Tony Carlson, Founder and Senior Editor of CCT, helped Gary Webb, Founder and Editor-in-Chief of the CHiP Network, build his initial subscriber base. The CHiP Network grew along with their personal and professional relationship with CCT.

"I remember Gary talking to me about his vision of creating a Congenital Heart Professionals Communications Network in mid 2013. His vision for The CHiP Network was officially launched in 2014 with the support of 28 congenital heart and pediatric cardiac institutions and organizations from around the world. Gary helped shape the future of ACHD worldwide. He will be dearly missed." —Tony Carlson, Founder & Senior Editor of *Congenital Cardiology Today*



SAINT LOUIS UNIVERSITY  
— EST. 1818 —

Division of  
Pediatric Cardiology  
Saint Louis University  
School of Medicine  
SSM Health  
Cardinal Glennon  
Children's Hospital

## Electrophysiologist

We are seeking a pediatric electrophysiologist to direct invasive and non-invasive electrophysiology services at our institution. Participation in outpatient clinic and inpatient care is also required. An interest in clinical research is encouraged. Academic rank will be commensurate with qualifications and experience.

The cardiology division is housed within the Dorothy and Larry Dallas Heart Center at SSM Health Cardinal Glennon Children's Hospital. The Heart Center opened in 2009 and underwent significant expansion in 2016. An active congenital heart surgery program exists, and the hospital houses state-of-the-art operating rooms, neonatal intensive care unit, pediatric intensive care unit, and a hybrid cardiac catheterization lab/operating suite. There is a dedicated bi-plane electrophysiology lab with 3-D mapping capabilities as well as trained lab staff, and a nurse practitioner dedicated to the EP service. SSM Cardinal Glennon Children's Hospital is a free-standing children's hospital and is staffed by faculty members of Saint Louis University School of Medicine.

Interested candidates may submit a cover letter and current CV to:

**Renuka Peterson, MD**  
Associate Professor, Pediatric Cardiology  
Saint Louis University School of Medicine  
1465 South Grand Blvd, St. Louis, MO 63104  
T. 314.577.5633 F. 314.268.4035  
E. [renuka.peterson@health.slu.edu](mailto:renuka.peterson@health.slu.edu)



# Pediatric Heart Failure / Transplant Cardiologist

## Overview

Children's Minnesota is seeking a dynamic, fellowship-trained pediatric heart transplant cardiologist to lead the Heart Failure Heart transplant (HFHT) program. This physician would have the benefit of collaborating with a comprehensive multidisciplinary team that includes: surgeons, cardiologists, transplant coordinators, dietitians, pharmacists, therapists and social workers. The HFHT program also offers a growing Ventricular Assist Device program as well as a well-established ECMO program.

Our Transplant program partners closely with The Children's Heart Clinic (CHC). Annually, the CHC cardiologists see more than 16,000 patients and surgeons perform over 400 surgical interventions. The CHC's state-of-the-art facilities include a dedicated pediatric cardiovascular intensive care unit, one of 30 approved pediatric cardiac catheterization laboratories in North America for transcatheter pulmonary valve placement, a complete pediatric arrhythmia service including the latest technology for ablation and devices, a collaborative fetal program for diagnosing and managing congenital heart disease in-utero, a collaborative adult congenital cardiology program, an ICAEL-accredited echocardiography lab and a rapidly growing congenital cardiac MRI/CT program.

## Program Description

Children's Minnesota's cardiovascular program provides comprehensive pediatric cardiovascular services and on average, we annually perform:

- 425+ cardiac surgeries
- 400+ cath procedures
- 12,000 + echos (1,200+ fetal)
- 370+ cardiac CT/MRIs

Children's Minnesota and Mayo Clinic Children's Center collaborate in the care of children with congenital heart disease and build on each organization's passion for children as well as the complementary strengths of both programs. The Mayo Clinic – Children's Minnesota Cardiovascular Collaborative is one of the largest and strongest pediatric cardiovascular collaborations in the country.

This exciting opportunity is open for a pediatric cardiologist with heart failure heart transplant experience to lead our recognized program. Candidates should have a strong commitment to patient care, teaching and clinical research.

## Requirements of the position include:

- Board Certified in Pediatric Cardiology from the American Board of Pediatrics
- Advanced Heart Failure/Transplant fellowship training in a program certified by the American Board of Pediatrics.
- Physicians should have clinical competency and expertise in caring for patients who are candidates for or are recipients of advanced heart failure therapies including mechanical circulatory devices.
- Must have an M.D., D.O. or equivalent degree from another country with a current Minnesota Medical License or the ability to obtain one.
- Ability to be successfully credentialed by both Hospital and 3rd Party Payers

## Children's Minnesota

Children's Minnesota is the seventh largest pediatric health system in the United States and the only health system in Minnesota to provide care exclusively to children, from before birth through young adulthood. An independent and not-for-profit system since 1924, Children's Minnesota serves kids throughout the Upper Midwest at two free-standing hospitals, 12 primary and specialty care clinics and six rehabilitation sites. Additionally, Children's Minnesota is Minnesota's only Level I pediatric trauma center inside a hospital dedicated solely to children. Children's Minnesota maintains its longstanding commitment to the community to improve children's health by providing high-quality, family-centered pediatric services and advancing those efforts through research and education

## Minneapolis - St. Paul (Twin Cities)

The Twin Cities has an estimated population of 3.5 million making it the 13th most populous metropolitan area in the US. The Twin Cities are known for their extraordinary quality of life, thriving economy, outstanding educational system and vibrant cultural amenities. The large numbers of colleges and universities, as well as the strong economy account for the high per-capita attendance at theatrical, musical and comedy events making the Twin Cities the capitol for arts in the upper Midwest. There are numerous lakes in the region and cities in the area have expansive park systems for recreation. Major sports teams include the Minnesota Twins (MLB), Vikings (NFL), Timberwolves (NBA), Wild (NHL) and the University of Minnesota (Big 10).

## For inquires please contact:

Ryan Berreth  
Physician Recruitment Manager  
Children's Minnesota  
[Ryan.berreth@childrensmn.org](mailto:Ryan.berreth@childrensmn.org)  
952.797.6660



## Dr. Richard Kovacs Named ACC Chief Medical Adviser/Chief Medical Officer

*In Inaugural Position, Kovacs Will Provide Clinical Council Across Staff and Leadership*

Richard “Dick” Kovacs, MD, MACC, was named Chief Medical Adviser/Chief Medical Officer of the American College of Cardiology—a role in which he will work with physician leadership and staff to provide clinical advice in fulfilling the College’s mission of transforming cardiovascular care and improving heart health. Kovacs is a past president of the College and has been an ACC member for over 30 years.

“Dick has been an exemplary leader in the College throughout his tenure as an ACC member, leading not only at the highest roles, but also in various committees and task forces ranging from finance to science and quality,” said ACC CEO Cathleen C. Gates. “His history of leadership in medicine and his breadth of experience throughout the different areas of the College make him a perfect fit to serve as CMA/CMO and bring his clinical expertise and knowledge to the ACC staff.”

In his role as CMA/CMO, Kovacs will counsel ACC staff on emerging clinical issues and help assess complex medical and scientific data. As a member of the senior executive staff, he will also work closely with partner cardiovascular societies, medical specialty organizations and external collaborators, including regulatory and governmental agencies, payers, and credentialing and licensing organizations.

“I’ve devoted a large portion of my professional career to volunteer member service to the ACC to help advance the mission and propel the field of cardiology forward,” said Kovacs. “I’m honored to expand my involvement as ACC Chief Medical Adviser and Chief Medical Officer and more closely work with the College staff and physician leaders to transform cardiovascular care on a global scale.”

Kovacs is the Q.E. and Sally Russell Professor of Cardiology at Indiana University (IU) School of Medicine and served as the cardiology service line leader of IU Health Physicians. He also served as the clinical director of the Krannert Institute of Cardiology.

Kovacs received his medical degree from the University of Cincinnati School of Medicine and completed an internship and residency at IU Medical Center. His fellowship training was also at IU, where he served as chief fellow and chief medical resident. He joined the IU School of Medicine in 1986 as an assistant professor, subsequently serving as the medical director and CEO of Methodist Research Institute. He then worked as a senior clinical research physician at the Lilly Research Laboratories of Eli Lilly and Company.

Kovacs returned to the IU School of Medicine faculty in 2003 and has since served as the Associate Dean for Clinical Research and associate director of the Indiana Clinical and Translational Sciences Institute.

Kovacs began his role as CMA/CMO on November 1, 2021.



## ACC, Wondr Medical to Create New Digital Educational Channel Enabling Interactive Learning Opportunities for Global Cardiovascular Community

*Channel Will Provide Access to World-Class Content, Support for Under-Supported Audiences*



AMERICAN COLLEGE of CARDIOLOGY



WONDR MEDICAL

The American College of Cardiology (ACC) and Wondr Medical are collaborating to create a new digital channel on the Wondr Medical Platform that will amplify the global reach of ACC’s educational content on a dynamic new platform. The partnership also provides access to ACC’s world-class content to the existing clinical users of Wondr Medical.

“As part of the ACC’s vision of a world where innovation and knowledge optimize cardiovascular care and outcomes, our partnership with Wondr is an exciting opportunity to increase access to ACC’s phenomenal educational content outside of those who have traditionally accessed it,” said Neal Kovach, MBA, Vice President, Global Innovation and Clinical Transformation. “By increasing the ACC’s global reach we can have a more active role in providing education and support for health care communities around the world caring for underserved populations and helping to reduce the global cardiovascular disease burden. Together with Wondr, we hope to create an interactive educational community where we can share our knowledge and better serve each other and our patients.”

The ACC and Wondr Medical will strive to create a digital channel that pairs ACC’s expertise and knowledge in creating high-quality cardiovascular care education with Wondr’s mission to democratize health care content globally through connection and social networking. ACC educational resources, such as NCD Academy, will now be available as part of Wondr’s content for medical professionals around the world, free-to-air and streaming on any device. In the coming months, the ACC and Wondr partnership will focus on creating and accelerating educational access and content for underserved audiences such as women in cardiology and more.

“We started Wondr with a vision to deliver the finest medical education to medical professionals wherever they were. This partnership with ACC is the clearest possible example of that vision becoming a reality. Now our users in 175 different countries can access the ACC’s resources, starting with on-demand clinical education, on the platform. This bold partnership brings new voices into the ACC family and will accelerate improvements in the delivery of cardiovascular care across the world,” said Justin Davies, MD, Founder, Wondr Medical.

Available today, ACC’s digital channel on Wondr features free, on-demand courses for cardiovascular professionals and primary care clinicians to explore a wide variety of expert analysis of practice-changing research, clinical guidelines and topics relevant to everyday practice while also earning Continuing Medical Education (CME) credit. Access the channel: <https://wondrmedical.net/ch/acc>.





# Interventional Pediatric Cardiologist

## Successful Pediatric Cardiology Practice - Tropical Florida Coast

Pediatric Cardiology Associates, located in Tampa Bay on Florida's Gulf Coast, is seeking a BC Interventional Pediatric Cardiologist with advanced fellowship training and experience in Congenital Intervention.

- Ideally seeking candidates with a minimum of 5 years of experience post-fellowship
- Large, experienced, well-established team of 14 pediatric cardiologists and 3 NPs with offices and clinics located throughout the Tampa/St. Petersburg area
- Offer comprehensive congenital cardiac care from fetal life through adulthood
- The team includes members of all pediatric cardiology sub-specialties including: fetal, advanced imaging (CT, MRI, 3D echo), intervention, electrophysiology, cardiomyopathy/heart failure, prevention, and adult congenital
- The interventional team performs over 400 catheterizations per year, about 60% of which are interventions
- Recent interventional team accomplishments include:implanting their 150th transcatheter pulmonary valve, Summer 2019
  - First program in Florida to implant the Gore Cardioform ASD Occluder, Fall 2019
  - Only program in Tampa Bay currently offering PDA device closure for premature newborns, first implant, Winter 2016
- Sub-specialty clinics include general pediatric cardiology, intervention, pulmonary hypertension, cardiomyopathy, ACHD, electrophysiology, and prevention
- Our ACHD program is the ONLY certified Adult Congenital Heart Association program in central Florida
- This position also offers:
  - Full time interventional duties with expected procedural volume of 200+ catheterizations per year
  - No expectation of inpatient service coverage
  - 24/7 collaboration with our excellent pediatric cardiac surgical and pediatric cardiac intensive care teams at St Joseph's Children's Hospital
- Our center offers a unique depth of hospital infrastructure:
  - Two state of the art 1000+ square foot hybrid capable catheterization labs/ORs (one biplane, one single plane)
  - Two additional biplane catheterization labs
  - Two EP labs
- We have the added benefits of a children's hospital inside a large tertiary adult hospital simplifying care across all patient ages with easy access to consultants from all pediatric and adult specialties
- PEDIATRIX, as a national pediatric cardiology group with over 125 pediatric cardiologists, provides opportunities for quality initiatives that can have national impact
- We offer an attractive schedule allowing freedom to enjoy a great quality of life
- Generous compensation package offered

Tampa Bay's warm weather affords plenty of opportunities to relish the great outdoors year-round. You will live in a region others only get to enjoy on vacation. Golf at one of nearly 100 courses or relax on one of the many pristine white-sand beaches. The area offers an assortment of family venues such as zoos, aquariums, theme parks, and state parks. Additionally, Tampa Bay offers access to world-class museums, professional sporting events and the performing arts. There is a wide range of residential choices to fit every budget and lifestyle – whether you are looking for big city downtown living, golf course communities, waterfront lifestyle, majestic horse farms or historic neighborhoods.

### Benefits

Our clinicians enjoy a competitive compensation package with many locations offering sign on bonuses, relocation and tuition reimbursement.

\*Our benefits include:

- Health (various options), life, vision, dental and disability insurance
- 401(k) with annual matching program
- Advanced and continuing medical education
- Leadership training and advancement opportunities
- Employee stock purchase plan at a 15% discount
- Professional liability insurance
- Support and payment for mandatory license/s and hospital credentialing

\*These benefits are for full time employees, employees in other types of employment classifications may be eligible for some of these benefits.

Apply Here: <https://www.click2apply.net/m66LAAFGmAzqikbmURbAA> PI148238810

Mednax Services, Inc. is a national medical group. Over the last 40 years, through our network of over 3,500 clinicians in 39 states and Puerto Rico, we have reshaped care delivery within women's and children's specialties and subspecialties. Our clinical teams care for the unique population of high-risk pregnancies and critically ill infants and children in both hospital and ambulatory clinical settings. Over the years, clinicians practicing as part of PEDIATRIX™ and OBSTETRIX™ Medical Groups have used evidence-based tools, continuous quality initiatives, clinical research, and telemedicine to enhance patient experience, outcomes and provide high-quality, cost-effective patient care. Our nationwide team of almost 8,000 employees, including physicians, advanced practitioners, clinical leaders, business and operational experts, work together every day to fulfill our mission to take great care of the patient®. We invite you to join the Mednax family and help shape the future of health care. Find additional information at [www.mednax.com](http://www.mednax.com).

MEDNAX is an Equal Opportunity Employer

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability or veteran status.



## Chief of Pediatric Interventional Cardiology

The Heart Center at Driscoll Children's Hospital is recruiting for a Chief of Interventional Cardiology to lead and guide a robust program engaged in providing the highest standard of care for its patients.

The ideal candidate will be board certified in Pediatric Cardiology with at least five years of clinical experience in pediatric interventional cardiac catheterization and a proven history in a leadership role with vision and strategic planning.

This is a full-time employed position with the multispecialty group, Children's Physician Services of South Texas (CPSST). The position offers a sign-on bonus, highly competitive compensation package, medical benefits, disability, life insurance, excellent retirement plans, generous paid vacation days, paid holidays, CME allowance and malpractice insurance.

Driscoll Children's Hospital is a freestanding children's hospital in Corpus Christi, Texas. The Driscoll Heart Center team includes inpatient and outpatient cardiologists specializing in Echo, Fetal, CMR, Imaging, electrophysiology, interventional cardiology, congenital cardiac surgeons, cardiac anesthesiologists and intensivists. Driscoll is a regional referral center for South Texas with supporting practices in Laredo, McAllen, and Brownsville.

Corpus Christi, Texas is a wonderful place to work, live and play! This is a dynamic coastal city with miles of beautiful beaches, world-class sailing, fishing and windsurfing. The mild climate allows for year-round outdoor family activities such as golf, cycling, and tennis. The cost of living is low, and there is no state income tax.

### Contact information:

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## FEBRUARY

### 17-19

**CATCH: Caring for Adults and Teens with  
Congenital Heart Disease**

Oahu, Hawaii, USA

<https://www.hawaiipacifichealth.org/CATCH>

### 26-01

**CRT22**

Washington, D.C., USA

[https://crtmeeting.org/Default.aspx?mkt\\_tok=MjcxLVJ\\_PVS0xMjQAAAGARtmr7GGCAKCWH-KPGINB9OBz\\_gWE70ZTgkzti5b8yjBY\\_CBNiT3RArF\\_35Kpicybtr-8YhHFysgwOThFq5ffpeaYr01wsngBVdWx](https://crtmeeting.org/Default.aspx?mkt_tok=MjcxLVJ_PVS0xMjQAAAGARtmr7GGCAKCWH-KPGINB9OBz_gWE70ZTgkzti5b8yjBY_CBNiT3RArF_35Kpicybtr-8YhHFysgwOThFq5ffpeaYr01wsngBVdWx)

## MARCH

### 15-17

**ALICE 2022 – Advanced Live Interventional  
Course of Essen**

Essen, Germany

<https://alice-the-course.info/>

### 26-27

**CSI Focus LAA & PFO**

Tokyo, Japan

<https://www.csi-congress.org/laa-pfo>

## APRIL

### 02-04

**ACC22**

Washington, D.C., USA

<https://accscientificsession.acc.org/>

### 29-01

**Heart Rhythm 2022:  
Bringing the World of EP Together**

San Francisco, California, USA

<https://heartrhythm.com/>



# Medical Director of Pediatric Echocardiography Pediatric Electrophysiologist

Charlotte, NC

The Congenital Heart Center at Levine Children's Hospital (LCH) and Sanger Heart & Vascular Institute (SHVI), seeks to recruit a **Medical Director of Pediatric Echocardiography** and a **Pediatric Electrophysiologist** to join their existing faculty.

- **Imaging candidates** will have completed an ACGME accredited fellowship in pediatric cardiology and be BC/BE by the American Board of Pediatrics; with expertise in echocardiography for congenital heart disease, including transthoracic, transesophageal, and fetal echocardiography. Candidate will be recruited as echocardiography lab director or will be expected to transition into that role within one year. Responsibilities will also include both outpatient and inpatient cardiology. A minimum of 5 years of experience and 4th year imaging fellowship are preferred. Call/weekend coverage on a rotating basis including echo backup call with 5 other imaging physicians.
- **Electrophysiology candidates** will have completed an ACGME accredited fellowships in pediatric cardiology and pediatric electrophysiology and should be BC/BE by the American Board of Pediatrics and will be expected to accomplish pediatric electrophysiology certification by the International Board of Heart Rhythm Examiners. He/she should be skilled in outpatient and inpatient congenital electrophysiology with experience and interest in transcatheter ablations and device implantation/management. Days will be split between the EP lab and clinic. Responsibilities will include attending on-site/satellite EP outpatient clinics including pacemaker/ICD clinics, providing inpatient/consult service coverage, remote device management and cardiology/EP call/weekend coverage on a rotating basis. The Pediatric/Adult Congenital Electrophysiology program has grown in procedural volume over 40% in each of the last two years, and is currently staffed by a single electrophysiologist and dedicated EP APP.
- ACHD board certification will be welcomed for either position but not essential.
- Team includes: 12 cardiologists, 3 congenital heart surgeons, 5 cardiac intensivists, 4 pediatric cardiac anesthesiologists, 2 pediatric cardiac radiologists, 26 APPs (includes 3 surgical APPs), 15 sonographers, 6 nurse navigators and 9 dedicated RNs

**The Congenital Heart Center**, established in 2010, has been ranked as one of the top-50 pediatric heart centers in the country by U.S. News and World Report for the last nine years. Our comprehensive services include cardiac imaging, diagnostic and interventional catheterization, electrophysiology, dedicated cardiovascular intensive care staff, and regional referral programs in heart failure / transplantation, adult congenital heart disease, and fetal echocardiography. Surgical and cardiac catheterization volume have been growing at a rate of 10-15% per year. Our state of the art two lab cardiac catheterization and electrophysiology suite opened in February of 2017, with dedicated staffing and anesthesia teams. Our new outpatient office complex will be opening in December 2020, designed to treat all from fetal cardiology to ACHD. We have one of the most comprehensive Cardiac Neurodevelopment programs in the region, providing a multitude of specialty services to our congenital heart population in the same office suite. Participation in investigator initiated and multi-center industry sponsored studies is ongoing within the Heart Center, with the support of an active clinical research department.

**Sanger Heart & Vascular Institute** (SHVI) is one of the Southeast's largest cardiac and vascular programs providing the highest quality care available to patient with cardiovascular disease throughout North and South Carolina. Sanger employs more than 110 physicians in a network of more than 25 locations to provide the highest quality care available to patients with cardiovascular disease throughout North and South Carolina. SHVI has more than 50 years of experience providing world-class, comprehensive acute and chronic cardiovascular services including the region's only heart transplant center and pediatric heart surgery program.

**Levine Children's Hospital** (LCH) is a state-of-the-art facility open since 2007 in beautiful Charlotte, North Carolina. LCH has 11 floors and 234 inpatient beds, including an on-site PICU and CVICU covered 24/7 by in-house intensivists, Progressive Care Unit, Inpatient Observation Unit, Pediatric Rehab Unit and Pediatric Emergency Department. We are committed to being the region's leading provider of pediatric health care services.

LCH and SHVI are both premier referral facilities within the Atrium Health (AH) one of the nation's leading and most innovative healthcare systems. AH operates nearly 2,500 system-employed physicians, more than 60,000 employees and more than 7,460 licensed beds across the Carolinas.

For more information or to submit a CV for review, please contact:

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