

Date of Preparation: July 8th, 2024

Signature.....SanjeevA.....

SANJEEV AGGARWAL, MD
Professor of Pediatrics (Clinician–Educator)
Discipline of Pediatrics
Central Michigan University

Office Address:

Division of Pediatric Cardiology
Children’s Hospital of Michigan
3901 Beaubien Blvd
Detroit, MI 48201

EDUCATION

M.B.B.S

Maulana Azad Medical College
Lok Nayak Hospital,
University of Delhi, India

Aug 1986-May 1992

POSTGRADUATE TRAINING

Fellow, Pediatric Cardiology
Department of Pediatrics
Wayne State University
Children’s Hospital of Michigan
Detroit, MI.

July 2002 -June 2005

Pediatric Resident
Department of Pediatrics
Wayne State University
Children’s Hospital of Michigan
Detroit, MI.

July 2000-June 2002

Pediatric Intern
Metropolitan Hospital Center
New York, NY

July 1999-June 2000

Pediatric Registrar
Lok Nayak Hospital &
University College of Medical Sciences
Delhi, India.

June 1996-June 1999

M.D. (Pediatric Residency) University
College of Medical Sciences Guru Teg
Bahadur Hospital University of Delhi,
India

May 1993-May 1996

FACULTY APPOINTMENTS

Professor of Pediatrics
Department of Pediatrics
Central Michigan University,
Mt Pleasant, MI April 2020 to present

Professor of Pediatrics
Department of Pediatrics
Wayne State University,
Detroit, MI Sept 2017 to present

Associate Professor
Clinician-Educator
Department of Pediatrics
Wayne State University,
Detroit, MI Aug 2012-Aug 2017

Assistant Professor
Clinician-Educator
Department of Pediatrics
Wayne State University,
Detroit, MI Feb 2007-Aug 2012

HOSPITAL OR OTHER PROFESSIONAL APPOINTMENTS

Medical Director, Echocardiography
Children's Hospital of Michigan
Detroit, MI 48201. Feb 2012- present

Medical Director, Cardiac MRI
Children's Hospital of Michigan
Detroit, MI 48201. Sep 2007- present

Pediatric Cardiologist
Children's Hospital of Michigan
Detroit, MI 48201 July 2006- present

Attending Staff
University Pediatricians and outreach clinics
Children's Hospital of Michigan
Detroit, Michigan 48201 July 2006- present

Consulting Staff
Henry Ford Hospital, MI
2799 W. Grand Blvd
Detroit, MI 48202 Aug 2006- present

Consulting Staff
St. Joseph Mercy Oakland
44405 Woodward Avenue
Pontiac, MI 48341 Aug 2006- present

Consulting Staff
Crittenton Hospital, MI
929 W University Dr
Rochester, Michigan 48307

Aug 2006- 2020

Consulting Staff
Providence Hospital
16001 W. 9 Mile Rd
Southfield, Michigan 48075

Aug 2006- 2020

Consulting Staff
St Joseph Mercy Hospital,
5301 McAuley Drive
Ypsilanti, MI 48197

Aug 2006- Dec 2013

Pediatric Cardiologist
St Charles Medical Center
Bend, OR

July 2005-June 2006

MAJOR PROFESSIONAL SOCIETIES

Member, American Heart Association
Member, American Society of Echocardiography
Member, North American Society of Cardiovascular Imaging
Member, American College of Cardiology
Member, Society of Cardiac Magnetic Resonance Imaging
Member, International Society of Heart & Lung Transplantation

2006-present
2006-present
2007-present
2006-2015
2007-2010
2006-2010

MEDICAL LICENSURE

State of Michigan License
Certified by ECFMG
Permanent Medical license (Medical Council of India)

BOARD CERTIFICATION

American Board of Pediatrics Certification

American Sub-Board of Pediatric Cardiology

HONORS/AWARDS

Top Docs, Pediatric cardiology by Hour Detroit Magazine

Top Docs, Pediatric cardiology by Hour Detroit Magazine

Nominated by the Department of Pediatrics for School of Medicine
Research Excellence Award

College Teaching Award, School of Medicine at Wayne State
University

Nominated by the Department of Pediatrics for Wayne State
University President's Award

<u>College Teaching Award, School of Medicine at Wayne State University</u>	2011
<u>Nominated by the Department of Pediatrics for School of Medicine Research Excellence Award</u>	2010
<u>Wolf Zuelzer Award 2nd prize for best research during fellowship, Children's Hospital of Michigan</u>	2005
<u>Michigan Association of Physicians from India, Annual Conference, 2nd Prize for original research</u>	2004

SERVICE

Central Michigan University and Wayne State University

Departmental/Divisional

Member Promotion and Tenure committee, Discipline of Pediatrics, Central Michigan University: I work with other members and the Chair to review and assess faculty CVs, guide them in the promotion process, draft letters of support and obtain external support.	2020 – 2024
Medical Director, Echocardiography: I supervise the daily functioning of the lab, maintain accreditation requirements, develop protocols for performance and interpretation of echocardiograms, and supervise technicians and fellows and direct quarterly Quality Assurance meetings involving physicians and echo technicians.	2012-present
Medical Director, Cardiac MRI: I initiated the cardiac MRI program in 2007 and am involved in expanding referrals for MRI. I develop protocols for cardiac MRI performance and interpretation, in collaboration with the Department of Radiology.	2009-present
Chair, Scholarly Oversight Committee, Division of Pediatric Cardiology: The five-member committee seeks to improve the study design of research projects in which the Pediatric Cardiology fellow is the principal investigator, suggest ways to improve recruitment, overcome hurdles during research, review grant proposals and provide ongoing written evaluation of research activities in the division. I have been a member of this committee since 2007.	2012-present
Member, Education Committee, Division of Pediatric Cardiology: This four-faculty member committee meets quarterly to discuss issues related to fellowship training and education.	2010-present
Point person in-charge, Division of Cardiology, Department of Pediatrics for WSU medical students rotating (weekly) through Division of Cardiology /Department of Pediatrics	2006-2020
Interviewer, faculty and residency candidates in the Department of Pediatrics and fellows and faculty in the Division of Pediatric Cardiology.	2006-present

School of Medicine (Wayne State University)

Departmental Faculty Development Liaison (DFDL) Program (Wayne State University). Point person for Department of Pediatrics (only one faculty member per department). The Departmental Faculty Development Liaison (DFDL) Program designates a senior, experienced faculty member within each department to extend the faculty development efforts of the Office of Faculty Affairs and to support mentoring for faculty members.	2017-2019
Mentor, WSUSOM Faculty Mentor Program, for ten 1st year medical students and one 2nd year medical student for two years	2013-2017
Participant faculty, Future Docs, WSU: I am involved in running the Heart Station of the Future Docs program at WSU.	2010-2016
Reviewer/Judge of abstracts, Pediatric research day (MSU Wayne State University)	2016, 2017, 2019
University (Wayne State University)	
Judge, Graduate Student Research Day, Wayne State University	2010-2012
Point person in-charge of Biomedical Engineering students, WSU, rotating through the Division of Cardiology /Department of Pediatrics	2011
Physician Practice Plan (University Pediatricians)	
Member, University Pediatricians Board: Non-voting member. I attend bi-monthly Board meetings to discuss fiscal and strategic concerns of the practice plan.	2014-2016, 2024-present
Affiliate medical organizations (e.g., DMC, HFH, Oakwood, Crittenton)	
Echo-cardiologist: I perform and interpret echocardiograms of patients seen in Cardiology outpatient clinic and admitted patients at Children's Hospital and Hutzel Women Hospital (10 days/month, 12 months a year)	2006-present
Attending Cardiologist for patients admitted with congenital or acquired heart disease to Pediatric and Neonatal Intensive Care Units and the floor at Children's Hospital of Michigan (Inpatient service four weeks/year).	2006-present
Consultant: Cardiology consultation on admitted patients and in the Division of Pediatric Emergency Medicine at Children's Hospital of Michigan (four weeks/year)	2006-present
Physician, Out-patient cardiology clinic, Children's Hospital of Michigan (six days/month, 12 months a year)	2006-present
Physician, Outreach Pediatric Cardiology Clinics at Henry Ford Hospital, Huron Valley, Hurley and Stilson Center (3-5 days a	2006-present

month)

Telemedicine echo-cardiologist: I interpret pediatric and adult congenital echocardiograms performed at St Joseph Mercy Hospital, Oakland, Crittenton Hospital, Henry Ford Macomb, Huron Valley Sinai Hospital, Port Huron, Sinai Grace Hospitals, Allegiance health and Hurley Hospital. (8-10 days/month, 12 months a year)	2006-present
Pediatric Cardiology consultant, St Joseph Hospital, Pontiac, Crittenton Hospital, Henry Ford Macomb, Huron Valley Sinai Hospital, Port Huron and Sinai Grace Hospitals.	2006-present
Physician, Cardiac Transplant Program: I was one of four (one of two until 2009) transplant cardiologists in the Cardiac Transplant program of Children's Hospital of Michigan, the <i>largest pediatric cardiac transplant program</i> in the state. I was involved in the multidisciplinary care of patients before and after cardiac transplantation.	2006-2011
Fetal echocardiography performance and interpretation	2006-2009
Professional (e.g., medical or scientific organizations and societies)	
Co-chair, Program Organizing Committee, North American Society of Cardiovascular Imaging	2015-2018
Member, Education Committee, North American Society of Cardiac Imaging: The purpose of the committee is to develop a comprehensive online curriculum for training of residents and fellows pursuing a career in Cardiovascular Imaging.	2011-2019
Member, Pediatric Imaging Committee, North American Society of Cardiac Imaging: I am involved in the planning of the pediatric agenda for the Society's Annual Conference	2009-present
Member, Protocol Committee, Childrens' Oncology Group-ALTE11C2 to evaluate long-term cardiovascular outcomes	2012-present
Invited Moderator: 46th annual Conference of North American Society of Cardiovascular Imaging, Charleston, SC	Sept 2018
Invited Moderator: 45th annual Conference of North American Society of Cardiovascular Imaging, San Antonio, Texas.	Oct 2017
Judge, Scientific Abstract sessions, 45th Annual Conference, North American Society of Cardiovascular Imaging, San Antonio, Texas.	Oct 2017
Invited Moderator: 44th annual Conference of North American Society of Cardiovascular Imaging, Washington D.C.	Oct 2016
Judge, Scientific Abstract sessions, 44th Annual Conference, North American Society of Cardiovascular Imaging, Washington D.C.	Oct 2016
Invited Moderator: 43rd annual Conference of North American Society of Cardiovascular Imaging, San Diego, CA	Oct 2015

Judge, Scientific Abstract sessions, 43rd Annual Conference, North American Society of Cardiovascular Imaging, San Diego, CA	Oct 2015
Judge, Scientific Abstract sessions, 42nd Annual Conference, North American Society of Cardiovascular Imaging, New Orleans, LA	Oct 2014
Judge, Scientific Abstract sessions, 41st Annual Conference, North American Society of Cardiovascular Imaging, Atlanta, GA	Oct 2013
Judge, Scientific Abstract sessions, 40th Annual Conference, North American Society of Cardiovascular Imaging, Pasadena, CA	Oct 2012
Judge, Scientific Abstract sessions, 39th Annual Conference, North American Society of Cardiovascular Imaging, Baltimore, MD	Sep 2011
Judge, Annual Resident and Fellow Research presentations, Children's Hospital of Michigan	2010-2012
Community	
Invited guest speaker, CME Lecture Series for community pediatricians and family medicine physicians. Topic: Syncope	April 2014
Invited guest speaker, Mt Clemens General Grand Rounds: Topic: Heart murmurs, chest pain, syncope, and arrhythmias	February 2012
Scholarly Service	
Associate Editor, Progress in Pediatric Cardiology: Invited to join the Editorial team of this peer-reviewed journal.	2015-present
Review of Manuscripts	
<i>Congenital Heart Disease</i> at-large reviewer	
<i>Journal of Perinatology</i> at-large reviewer	
<i>American Journal of Cardiology</i> at-large reviewer	
<i>American Journal of Perinatology</i> , at-large reviewer	
<i>Pediatric Radiology</i> , at-large reviewer	
<i>Journal of American Society of Echocardiography</i> ,	
<i>Neonatology</i> , at-large reviewer	
<i>Cardiology in the Young</i> , at-large reviewer	
<u>TEACHING</u>	
Central Michigan University	2020 -present
Wayne State University	July 2006 to present
Medical students	
Lead physician in-charge of the WSU medical student rotation through the division of Pediatric Cardiology. I have developed the student orientation program and ensure that the students have adequate exposure and involvement in various divisional activities. I teach medical students (3 rd and	Oct 2006-2020

4th year) during their weekly pediatric cardiology rotation.

Faculty presenter, Pathophysiology of Congenital Heart Disease- 2013-2016
Cardiovascular Pathophysiology Unit for 2nd year medical students

Residents/Fellows/Faculty (CME)

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Doppler and Hemodynamic Evaluation in Pediatric Cardiology”. 2022

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart I”. 2022

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart II”. 2022

Presenter: Pediatric Cardiology Lecture, Topic: "Basics of Research in Pediatric Cardiology". 2021

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Doppler and Hemodynamic Evaluation in Pediatric Cardiology”. 2021

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart I”. 2021

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart II”. 2021

Presenter: Pediatric Cardiology Lecture, Topic: "Basics of Research in Pediatric Cardiology". 2020

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Doppler and Hemodynamic Evaluation in Pediatric Cardiology”. 2020

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart I”. 2020

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart II”. 2020

Presenter: Pediatric Cardiology Lecture, Topic: "Basics of Research in Pediatric Cardiology". 2019

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Doppler and Hemodynamic Evaluation in Pediatric Cardiology”. 2019

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart I”.	2019
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart II”.	2019
Presenter: Pediatric Cardiology Lecture, Topic: "Basics of Research in Pediatric Cardiology".	2018
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Doppler and Hemodynamic Evaluation in Pediatric Cardiology”.	2018
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart I”.	2018
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart II”.	2018
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Aortic Stenosis and left ventricular outflow tract obstruction”	2017
Presenter: Pediatric Cardiology Lecture, Topic: "Basics of Research in Pediatric Cardiology".	2017
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Doppler and Hemodynamic Evaluation in Pediatric Cardiology”.	2017
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart I”.	2017
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart II”.	2017
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Aortic Stenosis and left ventricular outflow tract obstruction”	2016
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “AV Canal Defect”	2016
Presenter: Pediatric Cardiology Lecture, Topic: "Basics of Research in Pediatric Cardiology".	2016
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Doppler and Hemodynamic Evaluation in Pediatric Cardiology”.	2016
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart I”.	2016

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart II”.	2016
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “AV Canal Defect”	2015
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Aortic Stenosis and left ventricular outflow tract obstruction”	2015
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart I”.	2015
Presenter: Pediatric Cardiology Lecture, Topic: "Basics of Research in Pediatric Cardiology".	2015
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Doppler and Hemodynamic Evaluation in Pediatric Cardiology”.	2014
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “AV Canal Defect”	2014
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Aortic Stenosis and left ventricular outflow tract obstruction”	2014
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart I”.	2014
Presenter: Pediatric Cardiology Lecture, Topic: "Basics of Research in Pediatric Cardiology".	2014
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Doppler and Hemodynamic Evaluation in Pediatric Cardiology”.	2014
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic protocol and basics of echo views”	2014
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Echocardiographic evaluation of Transplanted Heart II”.	2013
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Aortic Stenosis and left ventricular outflow tract obstruction”.	2013
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “AV Canal Defect”	2013
Presenter: Pediatric Cardiology Lecture, Topic: "Basics of Research in Pediatric Cardiology".	2013
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on “Doppler and Hemodynamic Evaluation	2013

in Pediatric Cardiology".

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiographic protocol and basics of echo views". 2012

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiographic evaluation of Transplanted Heart". 2012

Invited speaker, Grand Rounds, Mt Clemens General Hospital, on "Heart murmurs, chest pain, syncope and arrhythmias" 2012

Invited speaker, Board Review course for Pediatric and Medicine-Pediatrics residents on "Infectious and systemic cardiac disease" 2012

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "AV Canal Defect". 2012

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiographic evaluation of Transplanted Heart". 2011

Invited speaker, Division of Maternal Fetal Medicine Lecture series, Department of Obstetrics, on Tetralogy of Fallot 2011

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Aortic Stenosis and left ventricular outflow tract obstruction". 2011

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiographic evaluation of Transplanted Heart" 2010

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Aortic Stenosis and left ventricular outflow tract obstruction". 2010

Presenter, Cardiology lecture for Pediatric and Medicine-Pediatric Residents and faculty on "Basic Hemodynamics and Cardiovascular physiology". Lecture was specifically tailored towards the content specifications of the Pediatric Boards. 2010

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiography evaluation of Transplanted Heart" 2010

Presenter, Research talk for fellows and faculty in the Department of Pediatrics on "B Natriuretic peptide: a marker in search of a disease?" in the Fellows' Educational and Research Conference 2010

Presenter, Divisional Lecture Series for faculty and fellows in the Division of Neonatology on "Approach to Congenital Heart disease" in the Neonatal Divisional Lecture Series 2009

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Aortic Stenosis and left ventricular outflow tract obstruction". 2009

Invited moderator, Neonatology Board Review Series in the Division of 2008

Neonatology for fellows and faculty.

Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiography evaluation of Transplanted Heart".	2008
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Aortic Stenosis and left ventricular outflow tract obstruction".	2008
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiography evaluation of Transplanted Heart".	2007
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Aortic Stenosis and left ventricular outflow tract obstruction".	2007
Presenter, Research seminar on "Aortic distensibility following heart transplantation" for Pediatric Cardiology fellows and faculty.	2007
Presenter, Cardiology lecture for Pediatric and Medicine-Pediatric Residents and faculty, "Cardiovascular physiology from Pediatric Cardiology Prospective". Lecture was specifically tailored towards the content specifications of the Pediatric Boards.	2007
Presenter, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Aortic Stenosis and left ventricular outflow tract obstruction"	2007
Presenter, Research seminar on "Effects of PDA ligation in premature infants" for Pediatric Cardiology fellows and faculty.	2007
Didactic lectures for residents and fellows during the cardiology, along with distribution of handout of presentation	2006 to present
Cyanotic Heart disease: Diagnosing and managing Management of Congestive Heart failure Mechanical assist devices Infective endocarditis Syncope, Rheumatic heart disease, Left to right shunt	
Weekly clinical teaching for resident/fellows from Children's hospital and other hospitals in Cardiology Clinic	2006- present
Supervising the performance of echocardiograms and teaching their interpretation to Cardiology fellows in Cardiology Clinic	2006-present
Supervision and teaching of cardiology fellows the technique and interpretation of cardiac MRIs	2006-present
Daily teaching rounds with fellows/residents in-patient cardiology while on service (bedside and didactics)	2006-present
Daily patient-related teaching of Heart transplant medicine while on transplant service (4-6months/year).	2006-present
Participant in Fellows' Educational Series, Department of Pediatrics	2006-present

(weekly); (25 fellows, 10 faculty)

Participant in group discussion during monthly Journal club	2006-present
Participant in group discussion during bi-weekly Echocardiography Conference for fellows	2006-present
Participant in group discussion during monthly core lecture series	2006-present
Participant in group discussion during monthly Cardiology fellow Research Council meeting	2006-present
Participant in group discussion, echocardiographic and MRI interpretation during weekly combined cardiology and cardiovascular conference	2006-present
Participant in weekly Pediatric grand rounds	2006-present
Participant in group discussion during quarterly combined cardiology and cardiovascular morbidity and mortality conference	2006-present

Echo-sonographers and MRI technicians:

Echo sonographers: supervision and teaching of new echocardiographic techniques (two days/week)	2006 to present
MRI technicians: Supervision and teaching of MRI protocols and techniques.	2007-present

Mentorship

List of Mentees

Cardiology Fellows:

Nikita Garg, MD
 Snigdha Bhatia, MD
 Dean Karahalios, MD
 Tayaba Miah, MD
 Diana M. Torpoco Rivera, MD
 Amrit Misra, MD
 Ryan Halas, MD
 Dipika Menon, MD
 Jyothsna Akam Venkata, MD
 Nathaniel C. Robbins, MD
 Neha Bansal, MD
 Rini Sahewala, MD
 Dor Markush, MD
 Shahnawaz M. Amdani MD
 Stuart H. Covi, MD
 Raya Safa, MD
 Richard Garcia MD
 Swati Sehgal, MD
 Ahmed Kheiwa MD
 Heather Sowinski MD
 Apinya Bharmanee MD
 Sallam Salaam MD
 Matthew Zinn MD
 Deepti Bhatt MD

Robert Hartman MD
Daisuke Kobayashi MD
Yamuna Sanil MD
Paolo Aquino MD
Sheetal Patel MD
Liwen Tang MD
Premchand Anne MD
Nishant Shah MD
Ashraf Harahsheh MD

Neonatal-Perinatal Medicine fellows

Carl Tabb Jr
Jagdish Desai, MD
Vaneet Kalra, MD
Roopali Bapat, MD
Prem Arora, MD
Josef Cortez MD,
Sanjay Chawla, MD

Pediatric Residents:

Ashish Shrivastva, MD
Daiji Takajo, MD
Anusha Konduri, MD
Doctor Pezad, MD
Levina Desai, MD
Drishti Tolani, MD
Huma Rashid, MD
Diana M.Torpoco Rivera, MD
Tayaba Miah, MD
Muhammad Umair M.Mian, MD
Diana M.Torpoco Rivera, MD
Silverste Duran, MD
Amira Soliman, MD
Abhishek Mewada, MD
Geetha Chellapudi MD
Zeeshan Khan MD
Krishnamallika Mutyala MD
Gurumurthy Hiremath MD
Divya Moodalbail MD
Muhammad Yasir Qureshi MD
Amit Aggarwal MD, Pediatric Resident, Hurley Medical Center

Radiology Resident:

Anum Aslam, MD

Wayne State Medical Student:

Thomas Przybycien
Namun Srivastva
Aarti D. Kamat
Patrick Wloszczynski,

Essays/Theses/Dissertations directed	Years of mentorship
(A) Fellows in Division of Pediatric Cardiology	2023- present
Nikita Garg, MD, Fellow, Pediatric Cardiology, 2023-present, Children's Hospital of Michigan Garg N*, Kadiu G, and Aggarwal S. Use of Left Atrial Indices to Predict Early Diastolic Dysfunction in Children with Malignancies Prior to Induction of Chemotherapy. American Society of Echocardiography 2024 (poster presentation)	
Snigdha Bhatia, MD Fellow, Pediatric Cardiology, 2021-present. Children Hospital of Michigan Bhatia S*, Kadiu G, Singh G, Aggarwal S. Longitudinal Changes in Left Ventricular Diastolic Function after Surgical Prosthetic Aortic Valve Replacement. American Society of Echocardiography 2024 (poster presentation) Bhatia S*, Kadiu G, Singh G, Aggarwal S. Abnormal Left Ventricular Function in Patients With Malignancies Persists After Receiving Chemotherapy at 1 Year Follow Up. American Society of Echocardiography 2024 (poster presentation) Bhatia S*, Kadiu G, Misra A, Safa R, Sanil Y, Blake JM, Charaf Eddine A, Balakrishnan P, Garcia R, Aggarwal S, Singh G. Acute Cardiac Remodeling and Abnormal Mechanics Recover in Multisystem Inflammatory Syndrome Related Myocarditis but Persist in Viral Myocarditis on Long Term Follow Up. American Society of Echocardiography 2023 (<u>Podium Presentation</u>) Bhatia S*, Kadiu G, Singh G, Aggarwal S. Comparison of Left Ventricular Mechanics in Patients with Congenital Aortic Valve Disease Following Prosthetic Aortic Valve Replacement vs. Ross Procedure. American Society of Echocardiography 2023 (<u>Podium Presentation</u>) Left Ventricular Function Assessment After Surgical Aortic Valve Replacement in Patients with Aortic Valve Disease. Accepted for AAP 2022 Longitudinal Changes in the Left Ventricular Function after Surgical Mechanical Aortic Valve Replacement in Patients with Aortic Valve Disease. Accepted for AAP 2022 Bhatia S, Kadiu G, and Aggarwal S. Left Ventricular Function	2021- present

Assessment After Ross and Ross Konno Procedure in Patients with Aortic Valve Disease. Presented ASE 2022 June

- Dean Karahalios, MD Fellow, Pediatric Cardiology, 2021-present. Children Hospital of Michigan 2021- Present

Karahalios D, Takajo D, Kadiu G, and Aggarwal S. Exploration of Global Longitudinal and Circumferential Strain Patterns in Pediatric Patients with Essential Hypertension. American Academy of Pediatrics 2023 (Poster presentation)

Effect of Atrial Septostomy on Left Ventricular Function in Pediatric Dilated Cardiomyopathy; Process of writing the manuscript 2020- present
- Tayaba Miah, MD. Fellow, Pediatric Cardiology, 2020-present. Children Hospital of Michigan

Left Ventricle function in children with Premature Ventricular Contractions: A speckle echocardiogram study. Obtained IRB approval; in the process of collecting data 2019- present
- Diana M.Torpoco Rivera, MD Fellow, Pediatric Cardiology, 2019-present. Children Hospital of Michigan

Vasoactive-ventilation-renal score: a reliable prognostic index for perioperative outcomes following congenital heart surgery in adults. Published in a peer-reviewed journal in May 2021. (See CV bibliography)

Updated Echocardiographic Effects of Long-Term Pacing on Left Ventricle and Left Atrial Function in Patients with Congenital Heart Block: Outflow Tract vs. Apical Pacing Sites. Poster presentation, American Academy of Pediatrics 2020

Left Epicardial vs. Best-site Right Ventricular Transvenous Pacing in Congenital Heart Block Patients: Ventricular Function Comparisons using 2-D Speckle Imaging. Poster presentation, American Academy of Pediatrics 2020
- Amrit Misra, Fellow, Pediatric Cardiology, 2018-2021. Children's Hospital of Michigan. Presently training in ACHD in Boston Children's Hospital 2018- present

Echocardiographic Indicators Associated with Adverse Clinical Course and Cardiac Sequelae in Multisystem Inflammatory Syndrome in Children with Coronavirus Disease 2019. Published in a peer-reviewed journal in May 2021. (See CV bibliography)

Does the Technique of Surgical Anastomosis Affect Left Atrium Function in Patients Following Heart Transplant? E-poster, American Society of Echocardiography annual conference. Published abstract in Journal of American Society of Echocardiography (JASE) 2020 June; 33 (6): B59

Evaluation of Left Atrial Strain and Diastolic Dysfunction in Pediatric Heart Transplant Patients.” E-poster, American Society of Echocardiography annual conference. Published abstract in JASE 2020 June; 33 (6): B59

Improving transitions of care for medically complex pediatric cardiology patients through a physician home visit program: A quality improvement project.” E-Poster, American Academy of Pediatrics, Section on Cardiology and Cardiovascular Surgery. October 2-5, 2020.

Does the Presence of Pre-chemotherapy Left Ventricle Dysfunction Effect the Post-Chemotherapy Outcomes? E-poster, American Academy of Pediatrics National Conference and Exhibition October 2-5, 2020.

Left Ventricle function in children Following heart transplantation: Obtained IRB approval; data is being collected.

Utility of Echocardiographic Parameters in Diagnosing Elevation of Left Ventricular End-Diastolic Pressure in Heart Transplantation Recipients. Poster, American Society of Echocardiography annual conference. Published abstract in JASE 2019. Vol 32(6): B34

Cardiac Work in Patients After Heart Transplant: A Novel Index to assess the Left Ventricular Function. Poster presentation, American Academy of Pediatrics 2019

Cardiac Work: A New Parameter to Assess the Ventricular Arterial Interaction in Patients with Repaired Congenital Heart Disease. Poster presentation, American Academy of Pediatrics 2019

- Ryan Halas, DO, Fellow, Pediatric Cardiology, 2018-2021. 2018- 2021
Children’s Hospital of Michigan. Currently pediatric cardiology consultant in Jackson, Michigan
Effect of Sickle Cell Disease on short term outcomes in children following the surgery for congenital heart disease. Manuscript published (See CV bibliography)
- Dipika Menon, MD Fellow, Pediatric Cardiology, 2017-2020. 2017- present
Children’s Hospital of Michigan, Completed 4th year training in Electrophysiology from Children’s Hospital of Philadelpha
Left atrial size and volume in children who have received chemotherapy. *Poster presentation:* Annual scientific session on American Society of Echocardiography. June 2018, Nashville, Manuscript published. (See CV bibliography)
Resynchronization Pacing In Congenital Heart Disease Patients: Non Invasive Imaging To Determine Efficacy. Podium presentation Heart Rhythm Society 2020. Under review, revision

of being sent.

- Nathaniel C. Robbins, MD. Fellow, Pediatric Cardiology, 2016-2019., Children's Hospital of Michigan. Presently Assistant professor, Rainbow Babies Hospital, Cleveland, OH. 2016-2019

Left ventricle function assessment by speckle track Imaging. An abstract is submitted for annual conference of American Society of Echocardiography June 2018, Nashville, TN. Podium presentation and Young Investigator Award, American Academy of Pediatrics 2018

- Jyothsna Akam-Venkata MD, Fellow, Pediatric Cardiology, 2016-2019. Pediatric Resident 2013-2016, Children's Hospital of Michigan. Completed 4th year fellowship from UT southwestern Dallas.. Presently Assistant professor, University of Mississippi Medical Center 2016 to present

Restrictive Lung Disease in Patients Following Repair of Tetralogy of Fallot: Does it Matter? Moderated Podium presentation, 65th Annual and Scientific Conference and Expo, American College of Cardiology, Chicago, 2016. Poster presentation, WSU/MSU Pediatric Research Day 2016. Awarded Sheldon Brenner Award for best Resident Research, Children's Hospital of Michigan, 2016. Published in a peer-reviewed journal in December 2019 (see CV bibliography).

Can Serum Biomarkers Predict the Outcome in Children with Dilated Cardiomyopathy? Poster presentation, Annual Conference, Pediatric Critical Care Medicine, Miami 2014. Awarded the runner-up Sheldon Brenner Award for Best Resident Research, Children's Hospital (2015). Manuscript is under preparation.

Impact of Type of Repair on Exercise Capacity in Patients with Tetralogy of Fallot (TOF)", Poster presentation, Pediatric Academic Societies (PAS) 2016, Baltimore, MD. Manuscript is under preparation.

Effect of Presence of Cancer in Children on Left Ventricle Function As Assessed by Speckle Echocardiography. Poster presentation: Annual scientific session on American Society of Echocardiography 2017. Oral presentation Wolf Zuelzer for Fellow Research, Children's Hospital of Michigan 2017. Published in a peer-reviewed journal in November 2019 (see CV bibliography).

Pediatric Malignancies: Is the Pre-chemotherapy Left Ventricular Function Normal? Published in a peer-reviewed journal in September 2019 (see CV bibliography).

Single Left Ventricle Function Following Fontan Palliation In Pulmonary Atresia Vs. Tricuspid Atresia: A Speckle Tracking

Echocardiography study. Poster presentation: Annual scientific session on American Society of Echocardiography. June 2018, Nashville, TN

Does Decreased Aerobic Capacity Correlate with Abnormal Biventricular Function in Patients with Repaired Tetralogy of Fallot? Poster presentation, American Society of Echocardiography annual conference. Published abstract in JASE 2019. Vol 32(6): B32

Does Right Ventricular Dilation Correlate with Biventricular Dysfunction in Patients with Repaired Tetralogy of Fallot? Poster, American Society of Echocardiography annual conference. Published abstract in JASE 2019. Vol 32(6): B35

- Neha Bansal, MD Fellow, Pediatric Cardiology, 2015-2018. Pediatric Resident, Children Hospital of Michigan, 2012-2015. Currently faculty (Assistant Professor) in Division of Pediatric Cardiology, Montefiore NY. 2012-present

Incidence and Risk Factors for Rehospitalization Following Orthotopic Heart Transplantation in Children. Poster presentation ISHLT 36th Annual Meeting & Scientific Sessions Washington, DC, April 2016. She was awarded the Travel Grant International Pediatric Transplant Association meeting in NY 2016, Podium Presentation. Manuscript is under preparation.

Prevalence of anemia in pediatric patients following Orthotopic Heart Transplantation. Poster presentation in WSU/MSU Pediatric Research Day March 2015. Manuscript is under preparation.

Does gender and ethnicity have an effect on $\dot{V}_E/\dot{V}CO_2$? Podium presentation, American Academy of Pediatrics National Conference and Exhibition. Washington, DC Oct 2015. Manuscript is under preparation

Does Exercise Capacity Correlate with Bi-Ventricular Volume and Function in Patients with Repaired Tetralogy of Fallot? Abstract presented in a national meeting and accepted for presentation in WSU/MSU Pediatric Research Day March 2016. Finalist for American Heart Association CVRI Young Investigator Award, Annual meeting NASCI, 2016. Manuscript is under preparation.

Sickle Cell disease and effect of blood transfusions: A speckle Echocardiographic study. Received a grant from Sarnaik Endowment for fellow Research (\$3,000). Poster Presentation: Annual scientific session on American Society of Echocardiography 2017

Bi-Ventricle Function Assessed by Speckle Tracking Echocardiogram in Neonates Born to Mothers with Clinical

Chorioamnionitis. Awarded Gerber Foundation Grant. Total Cost \$20,000.

Utility of Doppler Echocardiography to Estimate the Severity of Pulmonary Valve Regurgitation Fraction in Patients with Repaired Tetralogy of Fallot. Published in a peer-reviewed journal in January 2019 (See CV bibliography)

- Rini Sahewala, Fellow, Pediatric Cardiology, 2015-2018. Pediatric Resident, Children's Hospital of Michigan, 2012-2015. Currently 2014-2019 pediatric cardiology consultant in Texas

Left Ventricular Adaptation Following Orthotopic Heart Transplantation in Children: A Speckle Echocardiographic Imaging Study. Poster presentation, Annual conference, American Society of Echocardiography June 2016 and in WSU/MSU Pediatric Research Day March 2016. Published in a peer-reviewed journal in August 2019 (See CV bibliography)

Right Ventricular Adaptation Following Orthotopic Heart Transplantation in Children: Poster presentation: Annual scientific session on American Society of Echocardiography. June 2018, Nashville, TN and Pediatric research Day March 2018

- Dor Markush, MD Fellow, Pediatric Cardiology, 2014-2017. Completed 4th year fellowship for advanced imaging at Nationwide 2014-2019 Children's Hospital, Columbus OH. Currently faculty in division of Pediatric Cardiology at Stanley Children's hospital, CA

Noninvasive Measures of Pulmonary Hypertension by Echocardiography in Children with Cardiomyopathy. Poster presentation, American Society of Echocardiography June 2016, and WSU/MSU Pediatric Research Day March 2016. Finalist, Wolf Zuelzer Award for Fellow Research, Children's Hospital of Michigan 2016. Manuscript published in a peer reviewed journal in July 2018 (see CV bibliography)

- Stuart H Covi, MD, Fellow, Pediatric Cardiology, 2014-2017. Currently cardiologist at St John's Hospital, MI 2014-2019

Impact of bone marrow or stem cell transplantation on left ventricular function. Poster presentations, American Society of Echocardiography June 2016 and WSU/MSU Pediatric Research Day March 2016. 2nd prize, Wolf Zuelzer Award for Best Fellow Research. Manuscript published in a peer reviewed journal in November 2017. (See CV bibliography)

Utility of post-endomyocardial biopsy echocardiography in diagnosis and management of procedure related complications. Poster presentation: WSU/MSU Pediatric Research day 2017.

- Shahnawaz M. Amdani MD Fellow, Pediatric Cardiology, 2014-

2017. Completed 4th year fellowship in heart failure and transplant Washington University, St Louis, MO. Currently faculty in division of Pediatric Cardiology at Cleveland Clinic, Ohio. 2014-2018

Prevalence of metabolic syndrome and adverse atherogenic index in patients with congenital heart disease. Poster presentation, American Academy of Pediatrics National Conference and Exhibition. Washington, DC Oct 2015.

Utility of Routine Cardiac Screening Prior to Initiation of Propranolol for Hemangioma. Poster presentation in WSU/MSU Pediatric Research Day March 2016. Manuscript is under preparation

Utility of Echocardiography in Detecting Silent Complications After Pediatric Catheter Ablations. Published in a peer-reviewed journal in July 2017 (see CV bibliography)

Outcome of Pediatric Heart Transplantation in Blood Culture Positive Donors in the United States. Manuscript published in a peer reviewed journal in May 2018. (see CV bibliography)

- Raya Safa MD, Fellow, Pediatric Cardiology, 2013-2016. Currently faculty (Assistant Professor) in Division of Pediatric Cardiology, CMU Discipline of Pediatrics. 2013-present

Impact of cardiac surgery on the kidney function in adults with congenital heart disease. Poster presentation, American Academy of Pediatrics National Conference and Exhibition. Washington, DC Oct 2015

Application of Appropriate Use Criteria for Initial Transthoracic Echocardiography in a Single Academic Outpatient Pediatric Cardiology Program. Poster presentation, American Academy of Pediatrics National Conference and Exhibition. San Francisco Oct 2016. Manuscript published in a peer-reviewed journal in August 2017. (See CV bibliography)

- Swati Sehgal, MD Fellow, Pediatric Cardiology, 2011-2015. Currently faculty (Associate Professor) in Division of Pediatric Cardiology, CMU Discipline of Pediatrics. 2013-present

Strain and strain rate imaging using speckle tracking in acute allograft rejection in children with heart transplantation. Published in peer-reviewed journal in 2015 (See CV bibliography)

- Richard Garcia, Fellow, Pediatric Cardiology, 2013-2016. Currently faculty (Assistant Professor) in Division of Pediatric Cardiology, CMU Discipline of Pediatrics. 2013-present

Functional status following surgery for congenital heart surgery in neonatal period. Poster presentation, American Academy of Pediatrics National Conference and Exhibition, Orlando, FL, October 2014. Manuscript published in a peer-reviewed journal in 2016 (See CV bibliography)

Vasoactive Inotropic Score (VIS) and Lymphopenia as Biomarkers of Short-Term Outcomes in Adolescents after Cardiothoracic Surgery. Poster presentation, Annual Conference, Pediatric Critical Care Medicine, Miami, FL, 2014. Published in peer-reviewed journal in Feb 2016 (See CV bibliography)

Acute kidney injury following first-stage palliation in hypoplastic left heart syndrome: hybrid versus Norwood palliation. Published in a peer-reviewed journal in 2018 (See CV bibliography)

Obesity Increases Morbidity and Health Resource Utilization in Adolescent Patients with Congenital Heart Disease Undergoing Cardiovascular Surgery. Poster Presentation: 65th Annual and Scientific Conference and Expo, American College of Cardiology Chicago, March 2016. Manuscript published in a peer-reviewed journal in January 2020 (See CV bibliography).

Role of Hybrid Procedure in non hypoplastic heart syndrome. Manuscript is under preparation.

- Ahmed Kheiw, Pediatric Cardiology, 2013-2016; Medicine-Pediatrics Resident, Children's Hospital of Michigan, 2009-2013. Currently a 4th year Advance Cardiology Fellow at UCSF

2013-2016

Impact of Hyperglycemia on Short Term Outcomes following Complex Congenital Heart Surgery in Children.

Impact on left ventricular function of stent placement in descending aorta in patients with coarctation. Poster presentation, Annual Conference, American Society of Echocardiography June 2016. Manuscript published in a peer-reviewed journal in December 2016 (see CV bibliography)
- Heather Sowinski, Fellow, Pediatric Cardiology, 2012-2015; Pediatric Resident, Children Hospital of Michigan, 2009-2012. Currently a staff cardiologist at Devos Children's Hospital, Grand Rapid, Michigan

2009-2015

Comparison of Post Operative Hemodynamics in Neonates after Norwood vs. Hybrid Procedure.
- Apinya Bharmanee, Fellow, Pediatric Cardiology, 2012-2015; Pediatric Resident, Children Hospital of Michigan, 2009-2012.

2010-2015

Transcatheter Intervention in the Early Postoperative Period after Congenital Heart Surgery in Children. Poster presentation, Annual Conference of Pediatrics Intervention and Catheterization Society 2011, Boston, MA. Poster presentation, Annual Research Day organized by Wayne State University and Michigan State University 2011.

Prevalence and Implications of Obesity in Children with Congenital Heart Disease. Poster presentation, American Academy of Pediatrics National Conference and Exhibition, Orlando, FL, October 2013.
- Sallam Salaam, Fellow, Pediatric Cardiology, 2012-2015; Pediatric

Resident, 2009-2012. Currently a staff faculty at Seattle Children's Hospital, Seattle,

- Impact of anemia on the short term outcome in children with congenital heart disease. Poster presentation, Annual Conference, Society of Pediatric Research, Denver, CO, May 2011. Manuscript published in a peer reviewed journal in 2014 in *Pediatr Cardiol* (see CV bibliography #) 2012-2015
- Cardiac catheterization in children less than 2500 gm. Poster presentation, Annual Conference of Pediatric Intervention and Catheterization Society 2011, Boston, MA. Published in a peer-reviewed journal in November 2013 (See CV bibliography)
- Does Exercise Capacity Correlate With the Bi-Ventricular Volume and Function In Patients With Repaired Tetralogy Of Fallot?, Poster presentation, American Academy of Pediatrics National Conference and Exhibition, Orlando, FL, October 2013. Manuscript under preparation.
- Utility of Echocardiography in Detecting Silent Complications After Pediatric Catheter Ablations. Published in a peer-reviewed journal in 2017 (See CV bibliography)
- Pulmonary Hypertension and Transposition of Great Arteries: Poster presentation, Annual Conference, Society of Pediatric Research, Vancouver, May 2014. Published in a peer-reviewed journal in May 2016 (See CV bibliography)
- Matthew Zinn, MD, Fellow, Pediatric Cardiology, 2011–2014. Completed 4th year fellowship in Pediatric Heart Transplantation, Washington University, Saint Louis, MO. Currently faculty in division of Pediatric Cardiology at Pittsburg Children's hospital, PA. 2011-2014
 - Efficacy and Safety Profile of Bortezomib in Pediatric Heart Transplant recipients. Published in a peer reviewed journal in August 2014. (See CV bibliography)
 - Effect of Blood Product Transfusions on PRA in Patients Awaiting Heart Transplantation: A Pediatric Center Experience. Manuscript under review
 - Deepti Bhatt, MD, Fellow, Pediatric Cardiology, 2011–2014. Currently faculty, Phoenix, AZ
 - Aortic augmentation index and its impact on ventricular function in patients with repaired congenital heart disease. Poster presentation, American Academy of Pediatrics National Conference and Exhibition, Orlando, FL, October 2013. Published in a peer reviewed journal in 2015 (See CV bibliography) 2011-2014
 - Robert J. Hartman, MD, Fellow, Pediatric Cardiology, 2010–2013. Currently faculty, East Carolina Heart Institute
 - Cystic Fibrosis with Partial Anomalous Pulmonary Venous Return: An Uncommon Cause for Pulmonary Hypertension in 2010-2013

Cystic Fibrosis. Oral presentation, Annual Conference of American College of Cardiology, Michigan Chapter, MI 2011

Renal Profiles of Children Following Orthotopic Heart Transplantation.

- Daisuke Kobayashi MD, Fellow, Pediatric Cardiology, 2010–2021. Currently faculty, Department of Pediatrics, Washington University, St Louis

Effect of volume left ventricular mechanical dyssynchrony after hemodialysis in children with end-stage renal disease. Poster presentation, Annual Conference, American Heart Association 2011, Orlando, FL. Manuscript published in a peer-reviewed journal in *Pediatr Cardiol.* 2012. (see CV bibliography) 2010-2021

Myopericarditis in children: Elevated troponin level does not predict outcome. Poster presentation, the National Conference and Exhibition, American Academy of Pediatrics, 2011 Boston, MA. Manuscript published in a peer-reviewed journal. *Pediatr Cardiol.* 2012 (See CV bibliography)

Catheterization based intervention in low birth weight infants less than 2.5 kg - Is it definitive or palliative therapy? Pediatric and Adult Interventional Cardiac Symposium. 2011. Boston, MA, USA. Manuscript published in a peer-reviewed journal in November 2013. (see CV bibliography)

Effect of Caffeine on Patent Ductus Arteriosus. The protocol has been IRB approved and is enrolling subjects

Gender and Racial Variations in Left Ventricular Mechanical Dyssynchrony in Healthy Adolescents. Pediatric Academic Societies Annual Meeting. E-PAS 2012

Effect of Hybrid Stage 1 Procedure on Ventricular Function in Infants with Hypoplastic Left Heart Syndrome. Poster presentations at 8th Annual Pediatric Research Day, 2012 Wayne State University and Michigan State University and Annual Scientific Sessions of American Society of Echocardiography 2012, Baltimore, MD. 2nd prize, Wolf Zuelzer Research Award for fellows, Children's Hospital of Michigan, 2012. Effect of Hybrid stage 1 procedure on ventricular function in infants with hypoplastic left heart syndrome. Published in a peer-reviewed journal in Sep 2015 (see CV bibliography)

Comparison of Global Single Ventricular Function in Neonates with Hypoplastic Left Heart Syndrome and Normal Controls. Poster presentation, Annual Scientific Sessions of American Society of Echocardiography 2012. The manuscript is under review.

Gender and Racial Variations in Aortic Stiffness in Healthy Adolescents. Poster presentation, Annual Scientific Sessions of American Society of Echocardiography 2012.

- Parental anxiety among children undergoing cardiac catheterization. Published in a peer reviewed journal in October 2017 (see CV bibliography)
- Yamuna Sanil, Resident 2007-2009; Fellow Pediatric cardiology, 2009-2012. Currently faculty, Department of Pediatrics, Central Michigan University.
 - Lactic Acidosis Following Heart Transplant in Children: Uncertain Significance? Poster presentation, Society of Pediatric Research/Pediatric Academic Society Annual Conference, 2010. This research was awarded Best Research Award at the Michigan American College of Cardiology Conference, 2010. 2008-2012
 - Effect of Mild to Moderate Pulmonary Hypertension on short-term Outcomes after Orthotopic Heart Transplantation. IRB approved, currently in the process of data collection.
 - Diastolic dysfunction after orthotopic heart transplantation in children-outcomes and progression. Poster presentation, Annual Research Day, Wayne State University and Michigan State University 2011. Awarded Poster of Distinction. Poster presentation, National Conference and Exhibition, American Academy of Pediatrics, 2011 Boston, MA. The manuscript is under preparation.
 - Vasoactive-Inotropic Score Predicts Clinical Outcome after Pediatric Heart Transplant. Poster presentations, Annual Conference of American College of Cardiology, Michigan Chapter, MI 2011 and Society of Pediatric Research Annual Conference, Boston, 2012. Published in a peer-reviewed journal in September 2013. (PMID:23773439) (see CV bibliography)
 - Paolo Aquino, Fellow, Pediatric Cardiology, 2008-2011. Currently, Interventional cardiologist in Fresno, CA.
 - Role of blood biomarkers in the prediction of right ventricular dilatation in children with repaired Tetralogy of Fallot. The manuscript is under preparation. 2009-2011
 - Aquino, P was awarded the Sarnaik Endowment for Fellow Research (\$ 2500) for 2 years (2010 and 2011)
 - Liwen Tang, Pediatric Cardiology Fellow, 2007-2010. Currently faculty at Tufts University, Boston, MA
 - Comparative Evaluation of two Surgical Techniques for Pediatric Heart Transplantation: Is the bicaval approach better? Poster presentations, Annual Conference, American Association of Cardiology, Atlanta, 2010 and Society of Pediatric Research/Pediatric Academic Society Annual Conference, 2010. 2007-2010
 - Sheetal Patel, Fellow, Pediatric Cardiology, 2007-2010. Currently, faculty, Chicago Children Hospital, IL
 - Racial Variations in Cardiovascular Profiles of Pediatric Patients, IRB approved, has been taken over by Daisuke Kobayashi and is 2008-2010

in the process of data collection.

Effect of Hemodialysis on Aortic Stiffness in Children with End Stage Renal Disease. Oral presentation at Wolf Zuelzer presentation at Children' Hospital of Michigan, June 2008. Poster presentations, American Society of Echocardiography Annual Conference, June 2009 and in the Annual Conference of Society of Pediatric Research, May 2009.

Effect of volume left ventricular mechanical dyssynchrony after hemodialysis in children with end-stage renal disease. Poster presentation, Annual Conference, American Heart Association 2011, Orlando, FL. Manuscript published in a peer-reviewed journal in *Pediatr Cardiol*. 2012. (see CV bibliography)

- Premchand Anne, Fellow, 2006-2009. Currently Staff cardiologist, St John's Hospital, Detroit, MI

Predictors Of Pericardial Effusions Following Catheter Ablation In The Young. Submitted to Annual conference American College of Cardiology (ACC), 2008. 2008-2009

- Nishant Shah, Fellow, 2006-2009. Faculty CHM 2009-2011. Currently, faculty, Penn State University, Hersey, PA

2008-2012

B-type Natriuretic Peptide - an indicator of the severity of Persistent Pulmonary Hypertension of the Newborn. Poster presentation, National Conference and Exhibition, American Academy of Pediatrics, 2009 Washington DC. Manuscript published in a peer-reviewed journal *Am J Perinatol*. 2015 Sep;32(11):1045-9. Epub 2015 May 8. (PMID: 26368790) (CV bibliography)

Shah, N was awarded the Sarnaik Endowment for Fellow Research grant (\$ 2500) for the project B-type Natriuretic Peptide - an indicator of the severity of Persistent Pulmonary Hypertension of the Newborn (2008).

Sensitivity of Electrocardiographic Criteria in Screening for left Ventricular Hypertrophy in Children. Poster presentation, Society of Pediatric Research/Pediatric Academic Society Annual Conference, 2008. Poster symposium, Mid-Western Society of Pediatric Research (MWSPR), October, 2008. Awarded the runner-up Wolf Zuelzer Award for best research during fellowship (2008).

Electrocardiographic strain pattern in children with left ventricular hypertrophy- a marker of cardiac dysfunction. Poster presentation, American College of Cardiology (ACC), Michigan Chapter, September, 2008 where it was awarded runner-up for best research. Poster presentation, American Society of Echocardiography Annual Conference, June 2009. Manuscript published in a peer-reviewed journal: *Pediatr Cardiol*. 2010; 31(6):800-6. (PMID: 20422173) (see CV bibliography)

Outcome of Heart Transplantation in Pediatric Cancer Survivors.

- Podium presentation in American Heart Association Scientific Sessions, 2010. Published abstract in Circulation Nov 2010 and manuscript in a peer-reviewed journal: *Pediatr Transplant*. 2013 Aug;17(5):423-8. (PMID:23527878) (see CV bibliography)
- Ashraf Harahsheh, Fellow, graduated in 2008. Currently, faculty, Children's National Medical Center Washington, DC
 Diastolic Dysfunction in Anthracycline-Treated Children. Poster presentation at Annual Conference, Society of Pediatric Research 2007 at Toronto, Canada. Published in a peer-reviewed journal: *Cardiol Young*. 2014 Sep 23;1-6. (PMID: 25247608). (see CV bibliography)

(B) Fellows in Division of Neonatal Perinatal Medicine

- Carl Tabb MD, Fellow, Neonatology, 2019-2022, Children's Hospital of Michigan. Presently Attending in St Joe's Pontiac Hospital 2019-2023
 Tabb C Jr, Aggarwal S, Bajaj M, Natarajan G. Comparative Effectiveness of Surgical Ligation and Catheter Closure of Patent Ductus Arteriosus in Preterm Infants. *Pediatr Cardiol*. 2023 Jun 14. doi: 10.1007/s00246-023-03199-6. Online ahead of print. (PMID: 37316609)
- Jagdish Desai MD, fellow, Neonatal Perinatal Medicine, 2012-2015. Currently faculty, Division of Neonatology, University of Mississippi 2012-2015
 Outcomes and Interventions of Congenital Heart Disease in Preterm Infants: A National Database Analysis. Podium presentation, National Conference, American Academy of Pediatrics, San Diego, CA, Oct 2014. Poster presentation, Annual Conference Society of Pediatric Research, 2015. Published abstract in *Congenit Heart Dis* 2014.
 Surgical Interventions in Infants Born Preterm with Congenital Heart Defects: An Analysis of the Kids' Inpatient Database. *J Pediatr*. 2017 Sep 27. 476(17) (PMID: 2896442). (see CV bibliography)
- Vaneet Kalra MD, fellow, Neonatal Perinatal Medicine, 2010-2013. Currently faculty, Division of Neonatology, University of California Devis, CA 2010-2013
 B-type Natriuretic Peptide as a marker of Bronchopulmonary Dysplasia in Premature Neonates. Awarded Sarnaik Endowment for Resident and Fellow Research (\$2,500)-2011 –2013. Awarded Travel grant for Eastern SPR. Oral presentation, Annual Conference, Eastern Society of Pediatric Research, 2012. Poster presentation, Annual Conference, Society of Pediatric Research 2012. Published in a peer-reviewed journal: *Pediatr Pulmonol*. 2013 Nov 8. (PMID:24214578) (see CV bibliography)

- Prem Arora MD, fellow, Neonatal Perinatal Medicine 2010-2013. 2010-2013
Currently faculty, Division of Neonatology, Seattle

Comparison of Pulse Wave Velocity and Augmentation Index in Premature and term infants

- Roopali Bapat MD, fellow, Neonatal Perinatal Medicine, 2009-2011. 2009-2011
Currently faculty, Ohio State University, Nationwide Children's Hospital, Columbus, OH.

Right to left or bidirectional shunt across the patent ductus arteriosus in preterm neonates: A portender of death. Oral presentation in the 38th Annual Conference of Ohio Doctors Interested in Congenital Heart (ODICH), Detroit, MI, May 2010. Poster presentation National Conference & Exhibition, American Academy of Pediatrics, San Francisco, October 2010 and the Annual Conference of the Mid West Society of Pediatric Research 2010. Manuscript published in a peer-reviewed journal: Am J Perinatol. 2011 Jun 9. (PMID: 21660904) (CV bibliography)

Comparison of Pulse Wave Velocity and Augmentation Index in Premature and term infants: The protocol is IRB approved and has been taken over by Prem Arora.

- Josef Cortez MD, fellow, Neonatal Perinatal Medicine, graduated in 2009. Currently faculty, Department of Pediatrics, University of Florida, Jacksonville, FL 2008-2009

Abdominal ultrasound, echocardiographic findings and biomarkers of Necrotizing Enterocolitis.

- Sanjay Chawla, fellow, Neonatal Perinatal Medicine, graduated in 2009. Currently faculty, Department of Pediatrics, Wayne State University, Detroit, MI 2007-2009

PDA ligation for preterm infants: a setback, at least temporarily. Poster presentation in the Annual Conference, Mid-West Society of Pediatric Research 2008. Manuscript published in a peer-reviewed journal: Am J Perinatol. 2010; 27(6):431-7. (PMID: 20013575) (CV bibliography)

(c) Pediatric Residents from Children's Hospital and other Hospitals

- Ashish Shrivastava, MD Pediatric Resident, Children Hospital of Michigan, 2020 to present.

2020 to present

Shrivastava A, Takajo D, Sriram CS, Aggarwal S. Does maldistribution of Pulmonary Blood Flow Affect the Exercise Capacity in Patients with Repaired Tetralogy of Fallot?

- Daiji Takajo, MD Pediatric Resident, Children Hospital of Michigan, 2019 to present.

2019 to present

Takajo D, Sriram CS, Balakrishnan PL, **Aggarwal S**. The Identification and Impact of Abnormal Spirometry Patterns on Exercise Capacity in Pediatric Patients with Fontan Palliation. Pediatr Cardiol. 2021 Jun 14. doi: 10.1007/s00246-021-02661-7.

Online ahead of print. PMID: 34125256

Takajo D, Kota V, Balakrishnan PPL, Gayanilo M, Sriram C, **Aggarwal S**. Longitudinal Changes in Exercise Capacity in Patients Who Underwent Ross Procedure and Mechanical Aortic Valve Replacement: Does the Type of Surgery Matter? *Pediatr Cardiol*. 2021 Jun; 42(5):1018-1025. doi: 10.1007/s00246-021-02575-4. Epub 2021 Mar 8. PMID: 33682063

Takajo D, Sriram CS, Gayanilo M, Mahadin D and **Aggarwal S**. Exercise Capacity in Patients Who Underwent Arterial Switch Operation: Does the Coronary Anatomy Matter? AAP 2021. **Won 1st Prize Sheldon Brenner Resident Research Award**.

Takajo D, Sriram CS, Gayanilo M, Mahadin D and **Aggarwal**. Identification and Impact of Abnormal Spirometry Patterns on Exercise Capacity in Patients who Underwent Neonatal Arterial Switch Operation AAP 2021. Published (CV bibliography)

- Anusha Konduri, MD Pediatric Resident, Children Hospital of Michigan, 2019 to present 2019 to present
 Konduri A, Sriram CS and **Aggarwal S**. Exercise Capacity in Patients with Pulmonary Atresia with Intact Ventricular Septum: Does the type of repair matter? AAP 2021. **Won 3rd Prize, Sheldon Brenner Research Award** (CV bibliography)
 Konduri A, Sriram CS and **Aggarwal S**. Longitudinal Changes in Exercise Capacity in Patients with Pulmonary Atresia with Intact Ventricular Septum AAP 2021
- Huma Rashid, MD Pediatric Resident, Children Hospital of Michigan, 2018 to present. 2018 to present
 Rasheed H*, Gayanilo M, and **Aggarwal S**. Exercise Capacity and Blood Pressure Response in Children with Coarctation of the Aorta: Does Placement of Stent Matter? AAP 2019
- Pezad Doctor, MD Pediatric Resident, Children Hospital of Michigan, 2018 to 2021. 2018- present
 Doctor P*, Sriram C and **Aggarwal S**. Association between Premature Ventricular Contraction Burden & Exercise Capacity in Children with Normal Hearts. AAP 2019
 Does Premature Ventricular Contractions Affect Exercise Capacity in Teenagers with Normal Hearts? *Pediatr Cardiol*. 2021 Mar;42(3):606-613. (PMID: 33394114)
- Drishti Tolani, MD Pediatric Resident, Children Hospital of Michigan, 2018 to 2021 2018- present
 Tolani D*, Gupta P, and **Aggarwal S**. Effect of Pulmonary Valve Replacement on the Aerobic Capacity and Restrictive Lung Physiology in Patients with Repaired Tetralogy of Fallot. AAP 2019

- Diana M. Torpoco Rivera, MD Pediatric Resident, Children Hospital of Michigan, 2017 to 2020. She is currently Pediatric cardiology Fellow at Children's Hospital of Michigan 2017- present

The utility of Vasoactive Inotropic scores for predicting outcomes following surgery for congenital heart defects in adults. Presented an abstract at the annual conference of Society of Pediatric Research May 2018 Toronto, She also won the resident Award for Children's Hospital for her research. Manuscript is being prepared.

Torpoco- Rivera D*, Garcia R, and **Aggarwal S.** Are Perioperative Cell Line Abnormalities Associated with Increased Morbidity Following Adult Congenital Heart Disease Surgery? AAP 2019
- Tayaba Miah, MD, Pediatric Resident, Children Hospital of Michigan, 2017 to 2020. 2017 -present

Effect of Gender and Ethnicity on the short term outcomes after surgery for congenital heart defects in children. Miah T*, Natarajan G and **Aggarwal S.** Prediction of Mortality in Infants following Congenital Heart Surgery. AAP 2019
- Muhammad Umair M. Mian, MD; Pediatric Resident, Children Hospital of Michigan, 2017 to present. Currently a fellow in pediatric critical care medicine in Baylor School, Texas 2017 present

Acute kidney Injury following cardiac catheterization. abstract is presented to annual conference of AAP 2018.
- Silverste Duran, MD, Pediatric Resident, Children Hospital of Michigan, 2012-2013. Pediatric Cardiology, Dallas, Texas 2010-2013

Does transport of infants with hypoplastic left heart syndrome impact their physiologic stability scores? Podium presentation, National Conference and Exhibition, American Academy of Pediatrics 2014. San Diego. Manuscript published in a peer-reviewed journal (see CV bibliography #)
- Amira Soliman, MD, Pediatric Resident, Children's Hospital of Michigan, 2010-2013. Pediatric Cardiology fellow, University College of San Francisco, CA. 2009-2013

Hospital Readmissions after Neonatal Cardiac Surgery: Impact and Outcomes. Poster presentation, Annual Conference, Society of Pediatric Research, Washington D.C., 2013. Rehospitalization Following Neonatal Cardiac Surgery: Risk Factors and Outcomes. Am J Perinatol. 2015 Oct; 32(12):1133-8. (PMID: 26445142) (see CV bibliography)
- Abhishek Mewada, MD, Medicine-Pediatrics Resident, Children's Hospital of Michigan, 2009 to 2013. 2009-2012

Prevalence and Implications of Obesity in adults with Congenital Heart Disease. Poster presentations, 8th Annual Pediatric

- Research Day, 2012, Wayne State University and Michigan State University and at National Conference and Exhibition, American Academy of Pediatrics 2012, New Orleans. Runner-up, Sheldon Brenner Research Award for Best Research by a Pediatric Resident, 2012.
- Geetha Chellapudi MD, Pediatric Resident, Children Hospital of Michigan, 2009 to 2012. Fellow Pediatric Cardiology at Long Island Jewish College, New York, NY, 2012-2015. Currently an assistant professor in Division of Pediatric cardiology, Cleveland clinic, OH 2009-2012

Tracheostomy in Children after Congenital Heart Surgery: Poster presentation, National Conference and Exhibition, American Academy of Pediatrics 2012, New Orleans. Manuscript published in a peer-reviewed journal Congenit Heart Dis. 2013;8(6):556-60. (PMID:23510243) (See CV bibliography)
 - Zeeshan Khan MD, Pediatric Resident, Children's Hospital of Michigan, 2009 to 2012. 2009-2013

Impact of anemia on the short term outcome in children with congenital heart disease. Poster presentation, Annual Conference, Society of Pediatric Research, Denver, CO, May 2011. Best Poster Award at the Annual Research Day, Michigan State University & Wayne State University, 2011. Oral presentation, World Congress on Heart Disease, Toronto, Canada, 2011. Manuscript published in a peer reviewed journal: Pediatr Cardiol 2014;35(3):471-8 (PMID:24154503) (see CV bibliography)
 - Krishnamallika Mutyala MD, Pediatric Resident, Children Hospital of Michigan 2009 to present. Currently attending, Children's Hospital of Michigan. 2008-2010

Stent Fractures in Children with Congenital Heart Disease. The protocol is IRB approved and currently data is being collected
 - Gurumurthy Hiremath MD, pediatric resident, Children Hospital of Michigan 2008-2010. Fellow, Pediatric Cardiology, University College of San Francisco, CA, 2010-2013. At present staff attending Pediatric Cardiology at Minnesota. 2008-2010

Impact of balloon atrial septostomy in infants with transposition of great arteries. Poster presentations in the Annual Conference, Midwest Society of Pediatric Cardiology, 2009, Annual Conference Cardiology 2010 and Annual Conference, Society of Pediatric Research, Vancouver 2010. Published in a peer-reviewed journal: J Perinatol. 2011 Jul; 31(7):494-9. (PMID: 21273986) (See CV bibliography)
 - Sreedhar Anne Reddy MD, observer, 2008-2010

Enteral Feeding of infants with congenital heart disease. Poster presentation, National Conference & Exhibition, American Academy of Pediatrics, Washington DC, October 2009. Published in a peer reviewed journal: Neonatology. 2010; 98(4):330-336. (PMID: 20453528) (See CV bibliography) 2006-2009

- Outcomes of congenital heart disease in late preterm infants.
Poster presentation National Conference & Exhibition, American Academy of Pediatrics, San Francisco, October 2010. Published in a peer reviewed journal: Acta Paediatrica 2011 Mar 1 (PMID: 21362036) (See CV bibliography)
- Divya Moodalbail, Pediatric Resident, Children Hospital of Michigan 2006-2009. Completed fellowship in Pediatric Nephrology at Children's Hospital of Philadelphia, PA 2012 2008-2010
Obesity in Children with Congenital and Acquired Heart Disease: Double Jeopardy? Poster presentation and Best Poster Award, 8th Annual Pediatric Research Day, 2009, Wayne State University and Michigan State University. Poster presentation, National Conference and Exhibition, American Academy of Pediatrics, Baltimore, 2009.
 - Muhammad Yasir Qureshi, Pediatric Resident, Children Hospital of Michigan graduated in 2009, Currently Pediatric Cardiology attending at Mayo Clinic, MN 2008-2010
Safety and Efficacy of Sedation with Propofol for Transesophageal Echocardiography in Children with Congenital Heart defects. Abstract submitted to the Annual Conference of Society of Pediatric Research, 2010.
 - Amit Aggarwal, Pediatric Resident, Hurley Medical Center, Flint 2016-present
Use of intranasal Versed for sedation in pediatric echocardiography laboratory. Poster presentation, Annual Conference of the Society of Pediatric Research/Pediatric Academic Society, Honolulu, Hawaii, 2008.

(d) Radiology Resident at DMC

- Anum Aslam, MD, Radiology Resident, 2nd year 2016, DMC 2015-2019
Progression of Right Ventricle Dilatation Following Repaired of Tetralogy of Fallot: A Cardiac MRI Study. The study was presented as podium in radiology research day and she won the first prize for the best research presentation. *Podium Presentation* at annual conference of NASCI Oct 2016

(e) Students:

- Vashudha Kota, Medical Student from India 2018 to present
Kota V*, Sriram C and Aggarwal S. Comparison of Exercise Capacity in Patients with Mechanical Aortic Valve Replacement vs. Ross Procedure. AAP 2019
Kota V*, Sriram C and Aggarwal S. Longitudinal Change in Exercise Capacity in Patients Following Ross Procedure. AAP 2019
- Namun Srivastva, Medical Student 3rd year 2016, Wayne State University 2015
Longitudinal Change in Exercise Capacity in Patients Following

- Fontan Procedure. Abstract submitted to WSU/MSU Pediatric Research Day March 2017 and Annual Conference, Society of Pediatric Research, 2017
- Aarti D Kamat: Medical Student 3rd year 2016, Wayne State University 2013
Left Ventricular Function by Two-Dimensional Speckle Tracking Echocardiography in Children With Sick Cell Anemia. Abstract submitted to WSU/MSU Pediatric Research Day March 2017 and Annual Conference, Society of Pediatric Research, 2017
 - Patrick Wloszczynski, Medical student, 3rd year 2015, Wayne State University 2012
Prevalence of Restrictive Lung Disease (RLD) in Patients with Single Ventricle following Fontan Repair. Poster presentation in WSU/MSU Pediatric Research Day March 2016
 - Fadi Alyass, Undergraduate student, 3rd year(2013), Wayne State University 2010
What is the Significance of Lactic acidosis in Neonates with Congenital Heart Defects? The protocol is IRB approved.
 - Sandeep Jewani, Medical Student, 2nd year, Wayne State University, 2010
Prevalence and risk factors for feeding intolerance in hypoplastic left heart syndrome. The protocol is IRB approved and currently in the process of data collection.
 - Benjamin Strong, Medical student 2nd year (2010), Wayne State University 2009
Outcomes of Orthotopic Heart Transplantation in Pre Sensitized Pediatric Recipients. The protocol is IRB approved and currently data is being collected

Course or curriculum development

Echocardiographic Boot-Camp: I developed and conducted a 2-day intensive preparatory course to teach principles and techniques of echocardiograms for incoming Pediatric Cardiology fellows. The course included lectures and performance of echocardiograms on volunteer patients with feedback. July 2013 -present

I developed the online North American Society of Cardiovascular Imaging 1-year curriculum for fellowship directors, fellows and practicing radiologists. I provided learning objectives, review articles and links for several sections in Congenital Heart Disease. 2012-present

Cardiac MRI: As Director, Cardiac MRI program, I have developed the curriculum, goals and objectives and evaluation for a mandatory Cardiac MRI rotation for all fellows in the division of Pediatric 2010-present

Cardiology. I am responsible for their supervision, and for teaching them techniques and protocols and interpretation of cardiac MRIs.

GRANTS, CONTRACTS, AND OTHER FUNDING

Active National/International Grants and Contracts

1. **Role: Co-investigator**
Echocardiographic evaluation of Bi Ventricular Function Following Transcatheter Ductal closure in Preterm Neonates. Dr Ashok and Ingrid Sarnaik Endowment for Junior Faculty Research. Co-Investigator: Sanjeev Aggarwal, MD and Girija Natarajan, MD
Awarded in Jan 2023, Total \$25000 2023 to present
2. **Role: Co Investigator**
Cardiovascular and Metabolic Abnormalities in Childhood Survivors of Extreme Prematurity. PI Dr Gautam Singh. Children Foundation Grant. Awarded in April 2020. 2020 to present
3. **Role: Co Investigator (Site)**
Long-Term Outcomes after the Multisystem Inflammatory Syndrome In Children (MUSIC) study. Funded by Pediatric Heart Network, National Heart, Lung, and Blood Institute the National Institute of Allergy and Infectious Diseases. Grant Number: 3U24HL135691-03S3. 2020 to present
4. **Role: Co Investigator and Mentor**
Title: Inferior Vena Cava Collapsibility Index and its Relationship with direct measurements of Central Venous Pressure During Early Postoperative Period in patients Following Surgeries for Congenital Heart Defects. A grant from “Children’s Hospital of Michigan Research Award for Junior faculty”. Total Cost \$25,000. *PI: Richard Garcia, MD*, Children's Hospital of Michigan. Dr Garcia is an attending in Division of Pediatric Cardiology 2018 to 2020
5. **Role: Co Investigator and Mentor**
Title: Bi-Ventricle Function Assessed by Speckle Tracking Echocardiogram in Neonates Born to Mothers with Clinical Chorioamnionitis. A Gerber Foundation Grant. Total Cost \$20,000. *PI: Neha Bansal, MD*, Children's Hospital of Michigan. 2017 to 2020
6. **Role: Co-investigator**
Title: ALTE11C2: Health Effects after Anthracycline and Radiation Therapy (HEART): Dextrazoxane and Prevention of Anthracycline-related Cardiomyopathy. An NIH/COG funded grant R01. Total cost \$1,287,146.00 *PI: Dr Eric Chow, MD* Children's Hospital of Seattle. (salary effort 3%) 2013 to present
7. **Role: Co-investigator and central reader of ECHOs.**

Title: Effect of Hydrocortisone on the Cardiac function of Premature Intubated Infants < 30 weeks Gestational Age: Secondary Proposal to the Hydrocortisone Randomized Controlled Trial. **NICHD Administrative Supplements to Enable Continuity of Research Experiences of Maternal Fetal Medicine and Neonatal-Perinatal Physicians During Fellowship Training and Early Academic Career.** Total direct costs: \$228,000. *PI: Sanjay Chawla, MD, Attending in Division of Neonatology.* 2012-present

8. **Role: Co-Investigator.**

Title: Effect of cooling on cardiac function in neonates with Hypoxic-ischemic encephalopathy. **Children's Hospital of Michigan Foundation Dream, Discover and Hope Grant.** Total Cost: \$200,000 2014 to 2019

9. **Role: Principal Investigator.**

Title: Cardiovascular Profile after Heart Transplantation in Pediatric Patients. 11/2011-present. **Children's Hospital of Michigan Foundation.** Total direct costs: \$29,468. 11/2011-present.

10. **Role: Principal Investigator.**

Title: Cardiac structure and function in small for gestational age infants. **Children Research Center of Michigan.** Total direct costs: \$50,000. 06/2008 -present

Other Divisional Grants: Co-investigator (2018 onward)

11. KIDCARE (**K**awasaki **D**isease **C**omparative **E**ffectiveness Trial). Source: Patient-Centered Outcomes Research Institute. 2018-Total Direct Costs: \$12,600 per year
12. MK 1986-013: A Phase 1, Single-Administration Pharmacokinetic and Safety Study of Oral and IV Tedizolid Phosphate in Hospitalized Subjects 2 to <12 Years Old. Merck Pharmaceuticals Inc. 2016-2018. Total Direct Costs: \$133,208
13. MK 1986-014: A Phase 1, Single-Dose Safety and Pharmacokinetic Study of Oral and IV Tedizolid Phosphate (MK-1986) in Inpatients Under 2 Years Old
14. MK 1986-018: A Phase III Randomized, Active-comparator-Controlled Clinical Trial to Study the Safety and Efficacy of MK-1986 (Tedizolid Phosphate) and Comparator, in Subjects 3 Months to <12 Years of Age with Acute Bacterial Skin and Skin Structure Infections (ABSSSI). Source: Merck Pharmaceuticals Inc. 2018-Total Direct Costs: \$245,395.80

Previously funded Grants and Contracts

15. Role: Co-investigator: Role of oxidative stress in anthracycline - induced cardiac dysfunction. **Evergreen Endowment Fund (Festival of Trees), \$1,039,255.** PI Thomas J L'Ecuyer. of Trees. 2006-2013
16. Role: Faculty Mentor. Role of blood biomarkers in the prediction of

right ventricular dilatation in children with repaired Tetralogy of Fallot Sarnaik Endowment for resident and fellow research at the Children's Hospital of Michigan (\$2500). PI: Paolo Aquino. 2009-2011

17. Role: Faculty Mentor. B-type natriuretic peptide-an indicator of the severity of persistent pulmonary hypertension of the newborn. Sarnaik Endowment for resident and fellow research at the Children's Hospital of Michigan (\$2500). PI Nishant Shah 2008-2009

18. Role: Principal Investigator. Evaluation of role of B-type natriuretic peptide for the monitoring of anthracycline induced cardiotoxicity. Sarnaik Endowment for resident and fellow research at the Children's Hospital of Michigan (\$2500). 2004-2005

19. Role: Principal Investigator. Evaluation of plasma B-type natriuretic peptide (BNP) as a screening test for hemodynamically significant PDA in preterm neonates Sarnaik Endowment for resident and fellow research at the Children's Hospital of Michigan (\$2500). 2003-2004

Previously submitted, not funded Grants and Contracts

20. Role: Co-Investigator. Cardiac function and cerebral blood flow during varying depths and durations of Therapeutic hypothermia for neonatal hypoxic-ischemic encephalopathy. Submitted to Thrasher Research Fund for \$200, 000. PI: Girija Natarajan. 2012

CLINICAL TRIALS ACTIVITIES

- Effect of Hydrocortisone on the Cardiac function of Premature Intubated Infants < 30 weeks Gestational Age: Secondary Proposal to the Hydrocortisone Randomized Controlled Trial. **Role: Co-investigator and central reader of all echocardiograms across the NICHD Neonatal Research Network sites.** I have developed the protocol and forms for performance of study echocardiograms and training of technicians. 4/2012-2015.
- **Childrens' Oncology Group-ALTE11C2: Role: Protocol committee member and site co-investigator.** This is a multicenter COG study to examine long-term cardiovascular outcomes in patients enrolled in 2 legacy POG studies (9425/9426 – Hodgkin therapy with dexrazoxane randomization). This study performs anthropometric, serological and echocardiographic assessments of the cardiovascular health of long-term cancer survivors. 2013-present

PUBLICATIONS

I have published under two different names: Sanjeev is my first name. Due to a computer error, I was identified as Sanjeev Sanjeev in all official documents in the U.S from 1999 to 2006 and therefore I published as Sanjeev Sanjeev during this period. In 2006, I underwent a legal name change to correct my name to Sanjeev Aggarwal and have since published under this name.

Peer-Reviewed Publications

Reports of Original Work

** denotes trainee who performed the study under my mentorship*

1. Takajo D*, Przybycien TS, Balakrishnan PL, Natarajan G, Singh GK, **Aggarwal S**. Left ventricle hypertrophy and re-modeling in children with essential hypertension: does the race matter? *Cardiol Young*. 2024 Apr; 34(4):906-913. doi: 10.1017/S1047951123003840. Epub 2023 Nov 16. (PMID: 37968238)
2. Tabb C Jr*, **Aggarwal S**, Bajaj M, Natarajan G. Comparative Effectiveness of Surgical Ligation and Catheter Closure of Patent Ductus Arteriosus in Preterm Infants. *Pediatr Cardiol*. 2023 Jun 14. doi: 10.1007/s00246-023-03199-6. (PMID: 37316609)

(My role was in project development, data analysis and manuscript writing)

3. Chow EJ, **Aggarwal S**, Doody DR, Aplenc R, Armenian SH, Baker KS, Bhatia S, Blythe N, Colan SD, Constine LS, Freyer DR, Kopp LM, Laverdière C, Leisenring WM, Sasaki N, Vrooman LM, Asselin BL, Schwartz CL, Lipshultz SE. Dexrazoxane and Long-Term Heart Function in Survivors of Childhood Cancer. *J Clin Oncol*. 2023 Apr 20;41(12):2248-2257. doi: 10.1200/JCO.22.02423. Epub 2023 Jan 20. PMID: 36669148

(This is a multicenter study and I was the central reader for all the echocardiogram and CO-PI)

4. Torpoco Rivera DM*, Sriram C, Karpawich PP, **Aggarwal S**. Ventricular Functional Analysis in Congenital Complete Heart Block Using Speckle Tracking: Left Ventricular Epicardial Compared to Right Ventricular Septal Pacing. *Pediatr Cardiol*. 2023 Jun;44(5):1160-1167. doi: 10.1007/s00246-022-03093-7. Epub 2023 Jan 10. (PMID: 36625944)
5. Elias MD, Truong DT, Oster ME, Trachtenberg FL, Mu X, Jone PN, Mitchell EC, Dummer KB, Sexson Tejtzel SK, Osakwe O, Thacker D, Su JA, Bradford TT, Burns KM, Campbell MJ, Connors TJ, D'Addese L, Forsha D, Frosch OH, Giglia TM, Goodell LR, Handler SS, Hasbani K, Hebson C, Krishnan A, Lang SM, McCrindle BW, McHugh KE, Morgan LM, Payne RM, Sabati A, Sagiv E, Sanil Y, Serrano F, Newburger JW, Dionne A; Pediatric Heart Network MUSIC Study Investigators. Examination of Adverse Reactions After COVID-19 Vaccination Among Patients With a History of Multisystem Inflammatory Syndrome in Children. *JAMA Netw Open*. 2023 Jan 3;6(1):e2248987. doi:00.1001/jamanetworkopen.2022.48987. PMID: 36595296
6. Doctor P*, **Aggarwal S**, Garcia R. Is there an association of near-infrared spectroscopy with low cardiac output and adverse outcomes in single-ventricle patients after stage 1 palliation? *Ann Pediatr Cardiol*. 2022 May-Jun;15(3):249-256. doi: 10.4103/apc.apc_234_21. Epub 2022 Nov 16. PMID: 365896441
7. Menon D*, **Aggarwal S**, Kadiu G, Zelin KM, Karpawich PP. Assessing Non-invasive Studies to Evaluate Resynchronization Pacing Effectiveness in the Young. *Pediatr Cardiol*. 2022 Sep 5. doi: 10.1007/s00246-022-02996-9. Online ahead of print. (PMID: 36063175)
8. Konduri A*, Sriram C, Mahadin D, **Aggarwal S**. Exercise Capacity in Patients with Pulmonary Atresia with Intact Ventricular Septum: Does the Type of Surgical Repair Matter? *Pediatr Cardiol*. 2022 Jun 9. Online ahead of print. (PMID: 35678826)
9. Takajo D*, Sriram CS, Mahadin D, **Aggarwal S**. Exercise Capacity After Arterial Switch Operation in Patients with D-Transposition of Great Arteries: Does the Coronary Artery Anatomy Matter? *Pediatr Cardiol*. 2022 Apr 28. Online ahead of print. (PMID: 35482043)

10. Misra A*, Halas R, Kobayashi D, Walters HL 3rd, Bondarenko I, Thomas R, Vener DF, **Aggarwal S**, Safa R. Outcomes of Patients With Sick Cell Disease and Trait After Congenital Heart Disease Surgery. *Ann Thorac Surg*. 2022 Apr 26:S0003-4975(22)00571-9. Online ahead of print. (PMID: 35483424)
11. Doctor P*, **Aggarwal S**, Lawrence DK, Gupta P, Singh GK, Madhavan M, Sriram CS. Device-detected nonsustained ventricular tachycardia in adult congenital heart disease without tetralogy of Fallot. *Pacing Clin Electrophysiol*. 2022 Mar;45(3):302-313. Epub 2022 Jan 13. (PMID: 34856638)
12. Menon D*, Kadiu G, Sanil Y, **Aggarwal S**. Anthracycline Treatment and Left Atrial Function in Children: A Real-Time 3-Dimensional Echocardiographic Study. *Pediatr Cardiol*. 2022 Mar;43(3):645-654. Epub 2021 Nov 17. (PMID: 34787697)
13. Misra A*, Balakrishnan PL, Mewada A, Singla M, Singh G, **Aggarwal S**. Longitudinal Trends in Body Mass Index for Adults with Congenital Heart Disease. *Pediatr Cardiol*. 2022 Mar;43(3):547-553. Epub 2021 Oct 19. (PMID: 34665285)
14. Natarajan G, Bajaj M, **Aggarwal S**. Haemodynamic impact of chest compressions in the delivery room. *Cardiol Young*. 2022 Feb 16:1-3. Online ahead of print. (PMID: 35170424)
15. Chow EJ, Aplenc R, Vrooman LM, Doody DR, Huang YV, **Aggarwal S**, Armenian SH, Baker KS, Bhatia S, Constine LS, Freyer DR, Kopp LM, Leisenring WM, Asselin BL, Schwartz CL, Lipshultz SE. Late health outcomes after dexrazoxane treatment: A report from the Children's Oncology Group. *Cancer*. 2022 Feb 15;128(4):788-796. Epub 2021 Oct 13. (PMID: 34644414)
16. **Aggarwal S**, Shanti C, Agarwal P, Lelli J, Natarajan G. Echocardiographic measures of ventricular-vascular interactions in congenital diaphragmatic hernia. *Early Hum Dev*. 2022 Feb; 165:105534. Epub 2021 Dec 29. (PMID: 35065414)
17. Takajo D*, Sriram CS, Balakrishnan PL, **Aggarwal S**. The Identification and Impact of Abnormal Spirometry Patterns on Exercise Capacity in Pediatric Patients with Fontan Palliation. *Pediatr Cardiol*. 2021 Jun 14. doi: 10.1007/s00246-021-02661-7. Online ahead of print. PMID: 34125256
18. Sanil Y, Misra A*, Safa R, Blake JM, Eddine AC, Balakrishnan P, Garcia RU, Taylor R, Dentel JN, Ang J, Cashen K, Heidemann SM, Bauerfield C, Sethuraman U, Farooqi A, **Aggarwal S**, Singh G. Echocardiographic Indicators Associated with Adverse Clinical Course and Cardiac Sequelae in Multisystem Inflammatory Syndrome in Children with Coronavirus Disease 2019. *J Am Soc Echocardiogr*. 2021 May 3:S0894-7317(21)00468-5. doi: 10.1016/j.echo.2021.04.018. Online ahead of print. PMID: 33957250
19. Torpoco Rivera DM*, Garcia RU, **Aggarwal S**. Vasoactive-ventilation-renal score: a reliable prognostic index for perioperative outcomes following congenital heart surgery in adults. *Cardiol Young*. 2021 May; 31(5):762-768. doi: 10.1017/S1047951120004588. Epub 2020 Dec 17. PMID: 3332798
20. Garcia RU, Meert KL, Safa R, **Aggarwal S**. Inferior Vena Cava Collapsibility Index to Assess Central Venous Pressure in Perioperative Period Following Cardiac Surgery in Children. *Pediatr Cardiol*. 2021 Mar;42(3):560-568. doi: 10.1007/s00246-020-02514-9. Epub 2021 Jan 22. PMID: 33481045
21. Takajo D*, Kota V, Balakrishnan PPL, Gayanilo M, Sriram C, **Aggarwal S**. Longitudinal Changes in Exercise Capacity in Patients Who Underwent Ross Procedure and Mechanical Aortic Valve Replacement: Does the Type of Surgery Matter? *Pediatr Cardiol*. 2021 Jun;42(5):1018-1025. doi: 10.1007/s00246-021-02575-4. Epub 2021 Mar 8. PMID: 33682063

22. Doctor P*, Balakrishnan P, Sriram C, **Aggarwal S**. Does Premature Ventricular Contractions Affect Exercise Capacity in Teenagers with Normal Hearts? *Pediatr Cardiol*. 2021 Mar;42(3):606-613. doi: 10.1007/s00246-020-02521-w. Epub 2021 Jan 4. PMID: 33394114
23. Garcia RU, Balakrishnan PL, **Aggarwal S**. Does obesity affect the short-term outcomes after cardiothoracic surgery in adolescents with congenital heart disease? *Cardiol Young*. 2020 Jan 9:1-5. [Epub ahead of print] (PMID: 31915104).
24. Akam-Venkata J*, Kadiu G, Galas J, **Aggarwal S**. Prechemotherapy subclinical left ventricular dysfunction: Do we know the mechanism? *Echocardiography*. 2020 Jan; 37(1):156-157. Epub 2020 Jan 6. (PMID: 31903623).
25. Akam-Venkata J*, Kadiu G, Galas J, Lipshultz SE, **Aggarwal S**. Left ventricle segmental function in childhood cancer survivors using speckle-tracking echocardiography. *Cardiol Young*. 2019 Nov 27:1-7. [Epub ahead of print] (PMID: 31771663).
26. Akam-Venkata J*, Sriram C, French M, Smith R, **Aggarwal S**. Does Restrictive Lung Function Affect the Exercise Capacity in Patients with Repaired Tetralogy of Fallot? *Pediatr Cardiol*. 2019 Dec; 40(8):1688-1695. Epub 2019 Sep 17. (PMID: 31529227).
27. Akam-Venkata J*, Kadiu G, Galas J, **Aggarwal S**. Pediatric malignancies: Is the prechemotherapy left ventricular function normal? *Echocardiography*. 2019 Sep; 36(9):1727-1735. Epub 2019 Aug 31. (PMID: 31471982).
28. **Aggarwal S**, Agarwal P, Natarajan G. Echocardiographic prediction of severe pulmonary hypertension in neonates undergoing therapeutic hypothermia for hypoxic-ischemic encephalopathy. *J Perinatol*. 2019 Dec; 39(12):1656-1662. Epub 2019 Aug 30. (PMID: 31471580).
29. Sahewalla R*, Sehgal S, Blake J, **Aggarwal S**. Left ventricular adaptation following orthotopic heart transplantation in children: A speckle tracking echocardiographic imaging study. *Clin Transplant*. 2019 Aug; 33(8). Epub 2019 Jul 15. (PMID: 31309613).
30. Bansal N*, Mahadin DR, Smith R, French M, Karpawich PP, **Aggarwal S**. Comparative Cardiorespiratory Fitness in Children: Racial Disparity May Begin Early in Childhood. *Pediatr Cardiol*. 2019 Aug; 40(6):1183-1189. Epub 2019 Jun 8. (PMID: 31177302).
31. Bansal N*, Gupta P, Joshi A, Zerlin M, and **Aggarwal S**. Utility of Doppler Echocardiography to Estimate the Severity of Pulmonary Valve Regurgitation Fraction in Patients with Repaired Tetralogy of Fallot. *Pediatr Cardiol*. 2019 Jan 2. (PMID: 30600368)
32. **Aggarwal S**, Shanti C, Lelli J, Natarajan G. Prognostic utility of noninvasive estimates of pulmonary vascular compliance in neonates with congenital diaphragmatic hernia. *J Pediatr Surg*. 2018 Sep 9. [Epub ahead of print] (PMID: 30278985)
33. Markush D*, **Aggarwal S**. Authors' Reply. *J Am Soc Echocardiogr*. 2018. Sep; 31(9):1068. Epub 2018 Jul 17. (PMID: 30025645)
34. Amdani SM*, Du W, **Aggarwal S**. Outcome of pediatric heart transplantation in blood culture positive donors in the United States. *Clin Transplant*. 2018. May; 32(5):e13249. (PMID: 29607544)
35. Markush D*, Ross RD, Thomas R, **Aggarwal S**. Noninvasive Echocardiographic Measures of Pulmonary Vascular Resistance in Children and Young Adults with Cardiomyopathy. *J Am Soc Echocardiogr*. 2018 Jul; 31(7):807-815. (PMID: 29602613)
36. Covi S*, Ravindranath Y, Farooqi A, Savasan S, Chu R, **Aggarwal S**. Changes in Bi-ventricular Function After Hematopoietic Stem Cell Transplant as Assessed by Speckle

Tracking Echocardiography. *Pediatr Cardiol.* 2018 Feb; 39(2):365-374. (PMID: 29094192)

37. Kobayashi D, Turner DR, Forbes TJ, **Aggarwal S**. Parental anxiety among children undergoing cardiac catheterization. *Cardiol Young.* 2018 Feb; 28(2):315-321. (PMID: 29081306)
38. Garcia RU, Natarajan G, Walters HL, Delius RE, **Aggarwal S**. Acute kidney injury following first-stage palliation in hypoplastic left heart syndrome: hybrid versus Norwood palliation. *Cardiol Young.* 2018 Feb; 28(2):261-268. (PMID: 28889833)
39. Desai J*, **Aggarwal S**, Lipshultz S, Agarwal P, Yigazu P, Patel R, Seals S, Natarajan G. Surgical Interventions in Infants Born Preterm with Congenital Heart Defects: An Analysis of the Kids' Inpatient Database. *J Pediatr.* 2017 Dec; 191:103-109. (PMID: 28964428)

(My role was in project development, data analysis and manuscript writing)

40. Safa R*, **Aggarwal S**, Misra A, Kobayashi D. Application of Appropriate Use Criteria for Initial Transthoracic Echocardiography in an Academic Outpatient Pediatric Cardiology Program. *Pediatr Cardiol.* 2017 Aug; 38(6):1282-1287. (PMID: 28687888)

(My role was in project development, data analysis and manuscript writing)

41. Amdani SM*, Sallaam S, Karpawich PP, **Aggarwal S**. Utility of Echocardiography in Detecting Silent Complications After Pediatric Catheter Ablations. *Pediatr Cardiol.* 2017 Oct; 38(7):1426-1433. (PMID: 28711964).
42. **Aggarwal S**, Natarajan G. Biventricular function on early echocardiograms in neonatal hypoxic-ischaemic encephalopathy. *Acta Paediatr.* 2017 Jul; 106(7):1085-1090. Epub 2017 May 8. (PMID: 28374415).
43. **Aggarwal S**, Blake J, Sehgal S. Right Ventricular Dysfunction as an Echocardiographic Measure of Acute Rejection Following Heart Transplantation in Children. *Pediatr Cardiol.* 2017 Mar; 38(3):442-447. Epub 2016 Nov 23. (PMID: 27878627).
44. Duran SR*, **Aggarwal S**, Natarajan G. The effect of transport on the physiologic stability of neonates with ductal-dependent single-ventricle lesions. *J Matern Fetal Neonatal Med.* 2017 Apr 10:1-6. (PMID: 28393581)

(My role was in project development, data analysis and manuscript writing)

45. Kheiwa A*, **Aggarwal S**, Forbes TJ, Turner DR, Kobayashi D. Impact of Transcatheter Intervention on Myocardial Deformation in Patients with Coarctation of the Aorta. *Pediatr Cardiol.* 2016 Dec; 37(8):1590-1597. (PMID:27638781)

(My role was in project development, data analysis and manuscript writing)

46. Garcia RU*, **Aggarwal S**, Natarajan G. Parental perception of functional status and impact on the family of children with congenital heart surgery. *Early Hum Dev.* 2016 Mar 30;96:45-51. (PMID:27037482)

(My role was in project development, data analysis and manuscript writing)

47. Sallaam S*, Natarajan G, **Aggarwal S**. Persistent Pulmonary Hypertension of the Newborn with D-transposition of the Great Arteries: Management and Prognosis. *Congenit Heart Dis.* 2015 Nov 11. (PMID:26554402)

48. Soliman A, **Aggarwal S**, Natarajan G. Rehospitalization Following Neonatal Cardiac Surgery: Risk Factors and Outcomes. Am J Perinatol. 2015 Oct; 32(12):1133-8. (PMID: 26445142)

(My role was in project development, data analysis and manuscript writing)

49. Kobayashi D*, Natarajan G, Turner DR, Forbes TJ, Delius RE, Walters HL, **Aggarwal S**. Effect of Hybrid stage 1 procedure on ventricular function in infants with hypoplastic left heart syndrome. Cardiol Young. 2015 Sep 8;1-9. (PMID:26345472)
50. Garcia RU*, Walters HL 3rd, Delius RE, **Aggarwal S**. Vasoactive Inotropic Score (VIS) as Biomarker of Short-Term Outcomes in Adolescents after Cardiothoracic Surgery. Pediatr Cardiol. 2015 Sep 30. (PMID:26424215)
51. **Aggarwal S**, Natarajan G. Echocardiographic correlates of persistent pulmonary hypertension of the newborn. Early Hum Dev. 2015 Apr;91(4):285-9. (PMID: 25782054)
52. Chow EJ, Asselin BL, Schwartz CL, Doody DR, Leisenring WM, **Aggarwal S**, Baker KS, Bhatia S, Constone LS, Freyer DR, Lipshultz SE, Armenian SH. Late Mortality After Dexrazoxane Treatment: A Report From the Children's Oncology Group. J Clin Oncol. 2015 Aug 20; 33(24):2639-45. (PMID:26014292)

(This was a multi-center trial in which I was involved in data collection and review and revision of the manuscript)

53. Bhat DP*, Gupta P, **Aggarwal S**. Elevated Aortic Augmentation Index in Children Following Fontan Palliation: Evidence of Stiffer Arteries?. Pediatr Cardiol. 2015 Aug;36(6):1232-8. Epub 2015 Apr 2. (PMID:25832849)
54. Shah N*, Natarajan G, **Aggarwal S**. B-Type Natriuretic Peptide: Biomarker of Persistent Pulmonary Hypertension of the Newborn? Am J Perinatol. 2015 Sep;32(11):1045-9. (PMID: 26368790)
55. Sehgal S*, Blake JM, Sommerfield J, **Aggarwal S**. Strain and strain rate imaging using speckle tracking in acute allograft rejection in children with heart transplantation. Pediatr Transplant. 2015; 19(2):188-95. (PMID: 25532819)
56. Harahsheh A*, **Aggarwal S**, Pettersen MD, L'Ecuyer T. Diastolic function in anthracycline-treated children. Cardiol Young. 2015 Aug;25(6):1130-5. (PMID: 25247608)

(My role was in project development, data analysis and manuscript writing)

57. Kalra VK*, **Aggarwal S**, Arora P, Natarajan G. B-type natriuretic peptide levels in preterm neonates with bronchopulmonary dysplasia: A marker of severity? Pediatr Pulmonol. 2014 ;49(11):1106-11 (PMID:24214578)

(My role was in project development, data analysis and manuscript writing)

58. Zinn MD*, L'Ecuyer TJ, Fagoaga OR, **Aggarwal S**. Bortezomib use in a pediatric cardiac transplant center. Pediatr Transplant. 2014; 18(5):469-76 (PMID: 24931171).
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(I was the cardiologist involved in the case and wrote the cardiac portion of the case and was responsible for the images in this paper).

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Published Abstracts (must have a reference that can be looked up)

1. Kadiu G*, Takajo D, Singh GK, **Aggarwal S**. Speckle Strain Assessment of Right Ventricle in Pediatric Patients with Essential Hypertension: Does Ventricular Interaction Matter? American Society of Echocardiography 2024 (poster presentation)
2. Garg N*, Kadiu G, and **Aggarwal S**. Use of Left Atrial Indices to Predict Early Diastolic Dysfunction in Children with Malignancies Prior to Induction of Chemotherapy. American Society of Echocardiography 2024 (poster presentation)
3. Bhatia S*, Kadiu G, Singh G, **Aggarwal S**. Longitudinal Changes in Left Ventricular Diastolic Function after Surgical Prosthetic Aortic Valve Replacement. American Society of Echocardiography 2024 (poster presentation)
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5. Diana TR , Jain A , Kapur G, Nakdali M, **Aggarwal S**, Sehgal S. Prevalence and Risk Factors of Cardiac Abnormalities in Patients with End-Stage Renal Disease. ISHLT April 2024 (poster presentation)
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Health and Human Development (NICHD) Neonatal Research Network. Effect of Hydrocortisone (HC) on Cardiac Mass in Preterm Intubated Infants < 30 weeks Gestational Age. Pediatric Academic Societies 2024 (Poster presentation)

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(Selected for one of the best 3 research ideas)

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13. Bhatia S*, Kadiu G, Misra A, Safa R, Sanil Y, Blake JM, Charaf Eddine A, Balakrishnan P, Garcia R, **Aggarwal S**, Singh G. Acute Cardiac Remodeling and Abnormal Mechanics Recover in Multisystem Inflammatory Syndrome Related Myocarditis but Persist in Viral Myocarditis on Long Term Follow Up. American Society of Echocardiography 2023 (Podium Presentation)
14. Bhatia S*, Kadiu G, Singh G, **Aggarwal S**. Comparison of Left Ventricular Mechanics in Patients with Congenital Aortic Valve Disease Following Prosthetic Aortic Valve Replacement vs. Ross Procedure. American Society of Echocardiography 2023 (Podium Presentation)
15. Bhatia S*, Kadiu G, Singh G, **Aggarwal S**. Left Ventricle Remodels with Worsening Function after Surgical Mechanical Aortic Valve Replacement in Young Patients with Aortic Valve Disease. Pediatric Academic Societies 2023 (Poster presentation)
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160. Patel S*, Mattoo T, Valentini R, **Aggarwal S**. Effect of Hemodialysis on Aortic Stiffness in Children with End Stage Renal Disease. *Ped Research* Oct 2008; 444: 20.
161. Chawla S*, Natarajan G, **Aggarwal S**, Shankaran S. PDA ligation for preterm infants: a setback, at least temporarily. *Ped Research* Oct 2008; 15.
162. **Aggarwal S**, Patel S, Mattoo T, Valentini R. Impaired Left Ventricular Global and Diastolic Function in Children with End Stage Renal Disease. Podium presentation, 14th World Congress On Heart Disease, The International Academy Of Cardiology, Annual Scientific Sessions 2008, Toronto, ON, Canada
163. **Aggarwal S**, Patel S, Mattoo T, Valentini R. Myocardial Performance Index: A Preload-Independent Measure of Left Ventricular Global Function. Podium presentation, 14th World Congress On Heart Disease, The International Academy Of Cardiology, Annual Scientific Sessions 2008, Toronto, ON, Canada
164. Chawla S*, Natarajan G, **Aggarwal S**, Shankaran S. PDA ligation for preterm infants: a setback, at least temporarily. *E-PAS* 2008: 15.
165. Shah N*, Chintala K, **Aggarwal S**. Sensitivity of Electrocardiographic Criteria in Screening for left Ventricular Hypertrophy in Children. *E-PAS* 2008:30
166. **Aggarwal S**, Chintala K. Exercise Capacity Following Fontan Procedure: Does Ventricular Morphology Matter? *E-PAS* 2008:4487.1.
167. **Aggarwal S**, Agrawal A*, L'Ecuyer T, Humes R. Intranasal Midazolam: A safe Effective Alternative for sedation in the Pediatric Echocardiography Lab. *E-PAS* 2008:4486.13
168. **Aggarwal S**, Pettersen M, L'Ecuyer T. Measuring Stress Velocity Index Using Mean Blood Pressure-simple, yet accurate? *Pediatr. Res.* *E-PAS* 2007: 7910.3A
169. Chawla S*, Natarajan G, **Aggarwal S**, Shankaran S. PDA ligation for preterm infants: a setback, at least temporarily. *E-PAS* 2008: 15.
170. Harasheh AS*, **Aggarwal S**, Pettersen M, Zilberman M, Du W, L'Ecuyer T. Diastolic function in anthracycline-treated children. *Pediatr. Res.* *E-PAS* 2007: 7910.8 A

PRESENTATIONS

Podium Presentations (refereed)

1. 46th annual Conference of North American Society of Cardiovascular Imaging, 2018, Charleston SC. Topic: Ventricular-Arterial Coupling and Right Ventricular Dilation in Patients with Repaired Tetralogy of Fallot: A Cardiac MRI study
2. 45th annual Conference of North American Society of Cardiovascular Imaging, 2017, San Antonio, Texas. Topic: Doppler Echocardiography Parameters to Assess the Pulmonary Valve Regurgitation Fraction in Patients with Repair Tetralogy of Fallot
3. 27th Annual Scientific Sessions, American Society of Echocardiography 2017 Washington DC: Topic: Echocardiographic measures of Pulmonary Vascular Compliance: Novel Prognostic Markers For Congenital Diaphragmatic Hernia?
4. 27th Annual Scientific Sessions, American Society of Echocardiography 2017 Washington DC: Topic: Left Ventricular Dyssynchrony and Real Time 3 D Echocardiogram in Children Following Chemotherapy
5. Three Sinus Patch Technique: Repair of Supravalvular Pulmonary Stenosis: Oral presentation in Annual Conference of Congenital Heart Surgeon's Society. Oct 2010
6. Myocardial performance index: a prognostic marker for congenital diaphragmatic hernia. Oral presentation in the National Conference & Exhibition, American Academy of Pediatrics, Washington DC, October 2009
7. 14th World Congress on Heart Disease, The International Academy of Cardiology, Annual Scientific Sessions 2008, Toronto, ON, Canada. Topic: Impaired Left Ventricular Global and Diastolic Function in Children with End Stage Renal Disease.
8. 14th World Congress on Heart Disease, The International Academy of Cardiology, Annual Scientific Sessions 2008, Toronto, ON, Canada. Topic: Myocardial Performance Index: A Preload-Independent Measure of Left Ventricular Global Function.

Poster Presentations (refereed)

9. 25th Annual Scientific Sessions, American Society of Echocardiography 2014 Portland, OR: Topic: Right Ventricular Functional Parameters for Surveillance of Acute Rejection Following Orthotopic Heart Transplantation in Children
10. 25th Annual Scientific Sessions, American Society of Echocardiography 2014 Portland, OR Topic: Speckle Tracking Abnormalities of Left Ventricle Strain in Acute Allograft Rejection in Children with Heart Transplant.
11. American Heart Association Scientific Sessions. Poster presentation: 2011. Left Ventricular Dyssynchrony (LVD) in Children with End-Stage Renal Disease
12. National conference and exhibition, American Academy of Pediatrics, Boston, 2011. Poster presentation: Heart Rate Dynamics During Exercise Test In Children with Fontan Palliation.
13. National conference and exhibition, American Academy of Pediatrics, Boston, 2011. Poster presentation: Myopericarditis In Children: Elevated Troponin Level Does Not Predict Outcome.
14. National conference and exhibition, American Academy of Pediatrics, Boston, 2011. Poster presentation: Vasoactive - Inotropic Score After Pediatric Heart Transplant: A Marker of Adverse Outcome.
15. Annual Conference of Pediatric Academic Society/ Society of Pediatric Research 2011, The

right ventricular Systolic to Diastolic Duration Ratio: A Predictor of Severity of Congenital Diaphragmatic Hernia.

16. Annual Conference of Pediatric Academic Society/ Society of Pediatric Research 2011, Heart Rate Dynamics during Exercise Test in Children Following Surgical Repair of Congenital Heart Disease (CHD).
17. Annual Conference of Pediatric Academic Society/ Society of Pediatric Research 2010, Poster presentation: Effect of a loading dose of caffeine in preterm neonates on cardiac function and organ perfusion: evidence of cerebral redistribution?
18. 20th Annual Scientific Sessions, American Society of Echocardiography June 2009, Washington DC. Poster presentation Topic: Left Ventricular Mechanical Dyssynchrony Improves after Hemodialysis in Children with End-Stage Renal Disease.
19. Annual Conference of Pediatric Academic Society/ Society of Pediatric Research 2009, Baltimore, Maryland. Poster presentation Topic: Effects of loading dose of caffeine on superior venacaval flow in premature infants.
20. Annual Conference of Pediatric Academic Society/ Society of Pediatric Research 2009, Baltimore, Maryland. Poster presentation: Topic: Effect of a Single Loading Dose of Intravenous Caffeine on Intestinal Blood Flow in Preterm Neonates.
21. Annual Conference of Pediatric Academic Society/ Society of Pediatric Research 2008 Honolulu, Hawaii. Poster presentation: Exercise Capacity Following Fontan Procedure: Does Ventricular Morphology Matter?
22. Annual Conference of Pediatric Academic Society/ Society of Pediatric Research 2008 Honolulu, Hawaii. Poster presentation: Intranasal Midazolam: A safe Effective Alternative for sedation in the Pediatric Echocardiography Lab.
23. Annual Conference of Pediatric Academic Society/ Society of Pediatric Research 2007 Toronto, Canada. Poster presentation: Measuring Stress Velocity Index Using Mean Blood Pressure-simple, yet accurate?
24. Annual conference of American College of Cardiology, Orlando, FL March 2005 Poster presentation: B-type natriuretic peptide: a bedside marker of hemodynamically significant patent ductus arteriosus in preterm neonates.
25. Annual conference of American College of Cardiology, Orlando, FL March 2005 Poster presentation: Role of B-type Natriuretic Peptide for the monitoring of anthracycline induced cardiotoxicity
26. Annual Conference of Pediatric Academic Society/ Society of Pediatric Research 2004 San Francisco, CA. Poster presentation: Examination of anthracycline induced apoptotic pathways in H9C2 myoblasts.
27. Invited speaker: Annual conference of Society of Cardiac Intervention. San Diego, CA 2004. Topic: Do endovascular stents offer an effective palliation for right ventricle to pulmonary artery conduits?
28. Annual Conference of Pediatric Academic Society/ Society of Pediatric Research 2003, Seattle, WA. Poster Presentation: Developmental changes in sinus node function in growing children.

Refereed presentation at local/regional meetings

29. Outcomes of Congenital Heart Disease in Late Preterm Infants: Double Jeopardy? Oral presentation in the 38th Annual Conference of Ohio Doctors Interested in Congenital Heart (ODICH), Detroit, MI , May 2010
30. ACC Michigan Chapter annual meeting, Michigan, 2005. Topic: B-type Natriuretic Peptide as a marker for Cardiac Dysfunction in Anthracycline-Treated Children.
31. Midwest Cardiology annual meeting, Lincoln, Nebraska, 2002. Superior vena cava and innominate vein dimensions in growing children: An aid for interventional devices and transvenous leads

Invited Lectures/Presentations**International/national**

32. *Invited guest speaker:* 46th Annual Conference of North American Society of Cardiovascular Imaging, Charleston, SC 2018. Topic: Hypertrophy Cardiomyopathy
33. *Invited guest speaker:* 45th Annual Conference of North American Society of Cardiovascular Imaging, San Antonio 2017. Topic: Imaging of Aortic Arch
34. *Invited guest speaker:* 44th Annual Conference of North American Society of Cardiovascular Imaging, Washington DC 2016. Topic: Coarctation of aorta
35. *Invited guest speaker:* 42nd Annual Conference of North American Society of Cardiovascular Imaging, New Orleans, LA September 2014. Topic: Wall stress
36. *Invited guest speaker:* 41st Annual Conference of North American Society of Cardiovascular Imaging, Atlanta, GA September 2013. Topic: Difficult and interesting cases in cardiac MRI
37. *Invited guest speaker:* 40th Annual Conference of North American Society of Cardiovascular Imaging, Pasadena, CA Oct 2012. Topic: Postnatal Imaging for Surgical Planning.
38. *Invited guest speaker:* 39th Annual Conference of North American Society of Cardiovascular Imaging, Baltimore, MD Sept 2011. Topic: Tissue Doppler Imaging and Resynchronization Therapy.
39. *Invited guest speaker:* 36th Annual Conference of North American Society of Cardiovascular Imaging, Phoenix, AZ Oct 2008. Topic: Flow analysis: Flow and Congenital Heart Disease with Emphasis on echocardiography

Local/regional

40. Invited speaker: Divisional Echocardiographic lecture series, 2024. Topic: "Doppler and Hemodynamics evaluation in Pediatric Echocardiology"
41. Invited speaker: Divisional Echocardiographic lecture series, 2024. Topic: "Echocardiographic evaluation of Transplanted Heart I"
42. Invited speaker: Divisional Echocardiographic lecture series, 2024. Topic: "Echocardiographic evaluation of Transplanted Heart II"
43. Invited speaker: Divisional Echocardiographic lecture series, 2023. Topic: "Doppler and Hemodynamics evaluation in Pediatric Echocardiology"
44. Invited speaker: Divisional Echocardiographic lecture series, 2023. Topic: "Echocardiographic

evaluation of Transplanted Heart I"

45. Invited speaker: Divisional Echocardiographic lecture series, 2023. Topic: "Echocardiographic evaluation of Transplanted Heart II"
46. Invited speaker: Divisional Echocardiographic lecture series, 2022. Topic: "Doppler and Hemodynamic evaluation in Pediatric Echocardiology"
47. Invited speaker, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiographic protocol and basics of echo views", 2022.
48. Invited speaker: Pediatric Cardiology Lecture, 2022. Topic: "Basic of Research in Pediatric Cardiology"
49. Invited speaker: Divisional Echocardiographic lecture series, 2022. Topic: "Echocardiographic evaluation of Transplanted Heart I"
50. Invited speaker: Divisional Echocardiographic lecture series, 2022. Topic: "Echocardiographic evaluation of Transplanted Heart II"
51. Invited speaker: Divisional Echocardiographic lecture series, 2021. Topic: "Doppler and Hemodynamic evaluation in Pediatric Echocardiology"
52. Invited speaker, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiographic protocol and basics of echo views", 2021.
53. Invited speaker: Pediatric Cardiology Lecture, 2021. Topic: "Basic of Research in Pediatric Cardiology"
54. Invited speaker: Divisional Echocardiographic lecture series, 2021. Topic: "Echocardiographic evaluation of Transplanted Heart I"
55. Invited speaker: Divisional Echocardiographic lecture series, 2021. Topic: "Echocardiographic evaluation of Transplanted Heart II"
56. Invited speaker: Divisional Echocardiographic lecture series, 2020. Topic: "Doppler and Hemodynamic evaluation in Pediatric Echocardiology"
57. Invited speaker, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiographic protocol and basics of echo views", 2020.
58. Invited speaker: Pediatric Cardiology Lecture, 2020. Topic: "Basic of Research in Pediatric Cardiology"
59. Invited speaker: Divisional Echocardiographic lecture series, 2020. Topic: "Echocardiographic evaluation of Transplanted Heart I"
60. Invited speaker: Divisional Echocardiographic lecture series, 2020. Topic: "Echocardiographic evaluation of Transplanted Heart II"
61. Invited speaker: Divisional Echocardiographic lecture series, 2019. Topic: "Doppler and Hemodynamic evaluation in Pediatric Echocardiology"
62. Invited speaker, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiographic protocol and basics of echo views", 2019.
63. Invited speaker: Pediatric Cardiology Lecture, 2019. Topic: "Basic of Research in Pediatric Cardiology"
64. Invited speaker: Divisional Echocardiographic lecture series, 2019. Topic: "Echocardiographic evaluation of Transplanted Heart I"
65. Invited speaker: Divisional Echocardiographic lecture series, 2019. Topic: "Echocardiographic

evaluation of Transplanted Heart II"

66. Invited Speaker: Society of Michigan Echo. Topic Simple Shunts. November 2018
67. Invited speaker: Divisional Echocardiographic lecture series, 2018. Topic: "Doppler and Hemodynamic evaluation in Pediatric Echocardiology"
68. Invited speaker, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiographic protocol and basics of echo views", 2018.
69. Invited speaker: Pediatric Cardiology Lecture, 2018. Topic: "Basic of Research in Pediatric Cardiology"
70. Invited speaker: Divisional Echocardiographic lecture series, 2018. Topic: "Echocardiographic evaluation of Transplanted Heart I"
71. Invited speaker: Divisional Echocardiographic lecture series, 2018. Topic: "Echocardiographic evaluation of Transplanted Heart II"
72. Invited speaker: Divisional Echocardiographic lecture series, 2018. Topic: Doppler and Hemodynamic evaluation in Pediatric Echocardiology
73. Invited speaker, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiographic protocol and basics of echo views", 2017.
74. Invited speaker: Pediatric Cardiology Lecture, 2017. Topic: "Basic of Research in Pediatric Cardiology"
75. Invited speaker: Divisional Echocardiographic lecture series, 2017. Topic: "Echocardiographic evaluation of Transplanted Heart I"
76. Invited speaker: Divisional Echocardiographic lecture series, 2017. Topic: "Echocardiographic evaluation of Transplanted Heart II"
77. Invited speaker: Divisional Echocardiographic lecture series, 2017. Topic: "Aortic Stenosis and left ventricular outflow tract obstruction"
78. Invited speaker: Divisional Echocardiographic lecture series, 2016. Topic: "Topic: Complete Atrioventricular Canal Defect".
79. Invited speaker: Divisional Echocardiographic lecture series, 2016. Topic: Doppler and Hemodynamic evaluation in Pediatric Echocardiology
80. Invited speaker, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiographic protocol and basics of echo views", 2016.
81. Invited speaker: Pediatric Cardiology Lecture, 2016. Topic: "Basic of Research in Pediatric Cardiology"
82. Invited speaker: Divisional Echocardiographic lecture series, 2016. Topic: "Echocardiographic evaluation of Transplanted Heart I"
83. Invited speaker: Divisional Echocardiographic lecture series, 2016. Topic: "Echocardiographic evaluation of Transplanted Heart II"
84. Invited speaker: Divisional Echocardiographic lecture series, 2015. Topic: "Aortic Stenosis and left ventricular outflow tract obstruction"
85. Invited speaker: Divisional Echocardiographic lecture series, 2015. Topic: Doppler and Hemodynamic evaluation in Pediatric Echocardiology
86. Invited speaker, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and

echocardiographers on "Echocardiographic protocol and basics of echo views", 2015.

87. Invited speaker: Pediatric Cardiology Lecture, 2015. Topic: "Basic of Research in Pediatric Cardiology"
88. Invited speaker: Divisional Echocardiographic lecture series, 2015. Topic: "Echocardiographic evaluation of Transplanted Heart I"
89. Invited speaker: Divisional Echocardiographic lecture series, 2015. Topic: "Echocardiographic evaluation of Transplanted Heart II"
90. Invited speaker: Divisional Echocardiographic lecture series, 2014. Topic: " Topic: Complete Atriventricular Canal Defect".
91. Invited speaker: Divisional Echocardiographic lecture series, 2014. Topic: "Aortic Stenosis and left ventricular outflow tract obstruction"
92. Invited speaker: Divisional Echocardiographic lecture series, 2014. Topic: "Echocardiographic evaluation of Transplanted Heart I"
93. Invited speaker: Divisional Echocardiographic lecture series, 2014. Topic: "Echocardiographic evaluation of Transplanted Heart II"
94. Invited speaker: Divisional Echocardiographic lecture series, 2014. Topic: Doppler and Hemodynamic evaluation in Pediatric Echocardiology
95. Invited speaker, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiographic protocol and basics of echo views", 2014.
96. Invited speaker: Pediatric Cardiology Lecture, 2014. Topic: "Basic of Research in Pediatric Cardiology"
97. Invited speaker: Divisional Echocardiographic lecture series, 2013. Topic: "Aortic Stenosis and left ventricular outflow tract obstruction"
98. Invited speaker: Divisional Echocardiographic lecture series, 2013. Topic: "Echocardiographic evaluation of Transplanted Heart"
99. Invited speaker: Divisional Echocardiographic lecture series, 2013. Topic: " Topic: Complete Atriventricular Canal Defect".
100. Invited speaker: Divisional Echocardiographic lecture series, 2013. Topic: Doppler and Hemodynamic evaluation in Pediatric Echocardiology
101. Invited speaker, Echocardiographic lecture for Pediatric Cardiology fellows, faculty and echocardiographers on "Echocardiographic protocol and basics of echo views", 2013.
102. Invited speaker: Pediatric Cardiology Lecture, 2013. Topic: "Basic of Research in Pediatric Cardiology"
103. Invited speaker Divisional Maternal Fetal Medicine echocardiographic lecture series, September 2012. Topic: "Tetralogy of Fallot"
104. Invited speaker: Divisional Echocardiographic lecture series, August 2012. Topic: Aortic Stenosis and left ventricular outflow tract obstruction
105. Invited speaker: Divisional Echocardiographic lecture series, 2012. Topic: " Topic: Complete Atriventricular Canal Defect".
106. Invited speaker: Divisional Echocardiographic lecture series, March 2012. Topic: Echocardiographic evaluation of Transplanted Heart
107. Invited Speaker: Board Review for Pediatric and Medicine-Pediatric Residents, Scheduled for

April 2012 Topic: Infectious and Systemic Disease

108. Invited speaker: Divisional Echocardiographic lecture series, August 2011. Topic: Aortic Stenosis and left ventricular outflow tract obstruction
109. Invited speaker: Divisional Echocardiographic lecture series, April 2011. Topic: Echocardiographic evaluation of Transplanted Heart
110. Invited Speaker: Cardiology lecture for Pediatric and Medicine-Pediatric Residents, 2011 Topic: Basic Hemodynamic and Cardiovascular Physiology
111. Invited speaker: Divisional Echocardiographic lecture series, April 2011. Topic: Echocardiographic evaluation of Transplanted Heart
112. Invited speaker: Divisional Echocardiographic lecture series, September 2010. Topic: Aortic Stenosis and left ventricular outflow tract obstruction
113. Invited Speaker: Division of Neonatal Perinatal Medicine: August 2010, Topic: Approach to congenital heart disease
114. Invited Presenter: Fellows' Educational and Research Series, Department of Pediatrics, May 2010. Topic: B Natriuretic peptide: a marker in search of a disease?
115. Invited speaker: Divisional Echocardiographic lecture series, April 2010. Topic: Echocardiographic evaluation of Transplanted Heart
116. Invited speaker: Divisional Echocardiographic lecture series, September 2009. Topic: Aortic Stenosis and left ventricular outflow tract obstruction
117. Invited speaker: Divisional Echocardiographic lecture series, April 2009. Topic: Echocardiographic evaluation of Transplanted Heart
118. Invited speaker: Divisional Echocardiographic lecture series, Oct 2008. Topic: Aortic Stenosis and left ventricular outflow tract obstruction
119. Invited speaker: Pediatric Cardiology research seminar series Oct 2008 Topic: Aortic distensibility following heart transplantation
120. Invited speaker: Divisional Echocardiographic lecture series, April 2008. Topic: Echocardiographic evaluation of Transplanted Heart
121. Invited speaker: Divisional Echocardiographic lecture series, Oct 2007 Topic: Aortic Stenosis and left ventricular outflow tract obstruction
122. Invited Speaker: Pediatric Cardiology research seminar series, 2007 Topic: Effects of PDA ligation in premature infants
123. Invited Speaker: Cardiology lecture for Pediatric and Medicine-Pediatric Residents August 2007 Topic: Cardiovascular physiology from Pediatric Cardiology Prospective
124. Invited Speaker: Fellows' Educational Series, 2004 Topic: Role of B-type Natriuretic Peptide for the monitoring of anthracycline induced cardiotoxicity Invited Speaker: Fellows' Educational Series, 2003. Topic: B-type natriuretic peptide: a bedside marker of hemodynamically significant patent ductus arteriosus in preterm neonates.

Invited Seminars and Grand Rounds

125. Invited guest speaker, CME Lecture Series for community pediatricians and family medicine physicians.
Topic: Syncope April 2014
126. Invited guest speaker: Grand Rounds, Mt Clemens General Grand Rounds: February 2012.
Topic: Heart murmurs, chest pain, syncope, and arrhythmias