

COURSE ORGANIZERS:

Rangasamy Ramanathan, MD – Course Director
Professor of Pediatrics
Division Chief, LAC+USC Medical Center
Keck School of Medicine, University of Southern California

Shahab Noori, MD, MS CBTI, RDCS
Professor of Clinical Pediatrics
Keck School of Medicine, University of Southern California

Yogen Singh, MD, MA (Cantab), DCH, FRCPH
Professor of Pediatrics-Neonatology,
Loma Linda University School of Medicine

Mahmood “Mac” Ebrahimi, RDCS
Instructor of Clinical Pediatrics
Keck School of Medicine, University of Southern California

FACULTY:

Ruben Acherman, MD
Professor of Pediatrics, Cardiology
University of Nevada, Las Vegas, Nevada

Shazia Bhombal, MD
Associate Professor of Pediatrics
Stanford University School of Medicine, California
Medical Director, NICU Heart Team

Tai-Wei Wu, MD
Assistant Professor of Pediatrics
Keck School of Medicine, University of Southern California

Jennifer Shepherd, MD
Assistant Professor of Pediatrics
Keck School of Medicine, University of Southern California

Merujan Uzunyan, MD
Associate Professor of Clinical Pediatrics
Keck School of Medicine, University of Southern California
Director, Division of Pediatric Cardiology
LAC+USC Medical Center

Amin Adie, MD, FRCP (C), RDCS
Assistant Clinical Professor of Pediatrics
Keck School of Medicine, University of Southern California



Registration fee is \$1000.
For those in training the registration fee is \$700
For program information please contact:
Ms. Reyna Mayoral, Activity Coordinator at mayoral@usc.edu
or call (323) 409-3406

Space is limited.
Please register prior to July 1, 2022

Simulator Instructors

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|--------------------------|---------------------|
| Rangasamy Ramanathan, MD | Jessica Keel, MD |
| Yogen Singh, MD | Golenaz Kohbodi, MD |
| Mahmood Ebrahimi, RDCS | Fatima Afshari, DO |
| Shahab Noori, MD, RDCS | Danny Cho, MD |
| Amin Adie, MD | Sheema Gaffar, MD |
| Jennifer Shepherd, MD | Abigaile Leathe, MD |
| Molly Easterlin, MD | Manas Tetarbe, DO |
| Kameela Gateau, MD | Juan Velasquez, MD |

Recommended Book for the course:

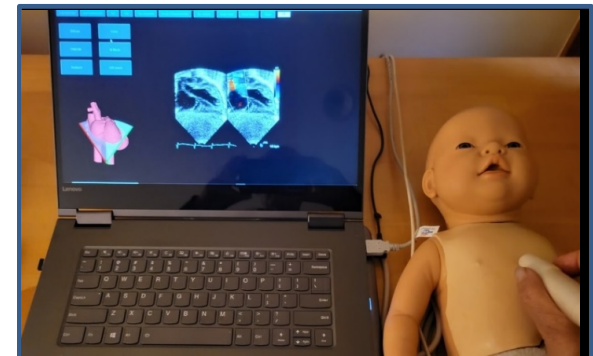
Practical Neonatal Echocardiography
Mc Graw Hill, 2019

FACULTY DISCLOSURE

Current guidelines state that participants in continuing medical education activities should be aware of any affiliation or financial interest that could affect the speaker's presentation(s). Faculty members have completed conflict of interest declarations and those potential conflicts will be listed in the course syllabus.

ACCREDITATION STATEMENT

The Keck School of Medicine of the University of Southern California is accredited by the Accreditation Council for Continuing Medical Education (ACCME) to provide continuing medical education for physicians.
The Keck School of Medicine of the University of Southern California designates this educational activity for (to be determined) *AMA PRA Category 1 Credit(s)*[™].



The 18th Annual Echo Course

Point of care Echocardiography in the Neonate

August 15-18, 2022

**PIH Health Good Samaritan Hospital
Los Angeles, California**



Course Highlights

- Hands-on training on fifteen echo simulators:
 - ✓ Obtain complete set of images from all cardiac windows and recognize various structures of a normal heart
 - ✓ Recognition of spatial relationship of cardiac structures obtained from cutting planes through a 3-dimensional heart image
 - ✓ Assessment of cardiac function and estimation of flow using calculation package
 - ✓ Differentiating abnormal cardiac structures from a normal heart
- Opportunity to perform echocardiography on volunteers

Course Objectives

Upon completion of this course, the participants are expected to:

- Understand basic principles of ultrasonography
- Identify correctly basic echocardiographic views
- Evaluate blood flow direction and velocity by pulse and continuous wave and color flow Doppler
- Identify correctly shunts through patent ductus arteriosus and foramen ovale
- Understand application of indices used in measurements of systolic and diastolic function of the heart
- Be able to do quantitative measurements of blood flow through aortic valve, pulmonary valve.
- Evaluate presence of pulmonary hypertension.
- Recognize presence of hypertrophic cardiomyopathy in infants of diabetic mothers
- know echocardiographic findings of pericardial effusion and early signs of cardiac tamponade
- Be able to suspect presence of CHD.

Basic Point of Care Echocardiography is part of core curriculum during neonatal fellowship at USC Medical Center. The participants are introduced to some elements of this training. However, development of competence to independently obtain quality echocardiograms requires training under supervision in our or any other Neonatal echocardiography laboratory .

Presented by:

Division of Neonatology, LAC+USC Medical Center and PIH, Health Good Samaritan Hospital, Keck School of Medicine, University of Southern California, Los Angeles, CA, USA

Course Presentation Schedule

Monday, August 15, 2022

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| 08:00 | Introductory remarks Rangasamy Ramanathan, MD |
| 08:20 | Basic physical principles of ultrasonography: 2D and Color flow Merujan Uzunyan, MD |
| 09:00 | Basic physical principles of ultrasonography: M-mode and Doppler Merujan Uzunyan, MD |
| 10:00 | Standard echocardiographic views Mahmood "Mac" Ebrahimi, RDCS |
| 11:00 | 11:00-11:20 Introduction to Simulator 11:25-11:35 Student test for first group 11:40-11:50 Student test for second group |
| 12:00 | Lunch |
| 13:00 | Echo simulation and hands on practice (4 Hours) Mac Ebrahimi and staff |
| 17:00 | Adjourn |

Tuesday, August 16, 2022

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| 08:00 | Effect of assisted ventilation on cardiovascular function Rangasamy Ramanathan, MD |
| 09:00 | Assessment of systolic, diastolic and global cardiac function in Neonates Yogen Singh, MD |
| 10:00 | Assessment of aortic, pulmonary and intestinal, renal and cerebral blood flows. Tai-Wei Wu, MD |
| 11:00 | Severe myocardial dysfunction, heart failure and shock in term and premature neonates Yogen Singh, MD |
| 12:00 | Lunch |
| 13:00 | Echo simulation and hands on practice (4 Hours) Mac Ebrahimi and staff |
| 17:00 | Adjourn |

Wednesday, August 17, 2022

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| 08:00 | Assessment of pulmonary hypertension in term and preterm neonates Shahab Noori, MD |
| 09:00 | Normal and Abnormal transitional circulation in neonates without CHD. Amin Adie,, MD |
| 10:00 | Assessment of hemodynamic significance of patent ductus arteriosus in premature neonates Shahab Noori, MD |
| 11:00 | Perinatal manifestation of CHD Shazia Bhombal, MD |
| 12:00 | Lunch |
| 13:00 | Echo simulation and hands on practice (4 Hours) Mac Ebrahimi and staff |
| 17:00 | Adjourn |

Thursday, August 18, 2022

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| 8:00 | Fetal echocardiography in evaluation of cardiovascular function: arrhythmia, congestive heart failure, hydrops and vascular flow patterns Ruben Acherman, MD |
| 9:00 | Fetal echocardiography and Doppler Ultrasonography in the diagnosis of Congenital Heart Disease : An overview Ruben Acherman, MD |
| 10:00 | Use of non-cardiac ultrasonography in assessment and management of neonates in the NICU Jennifer Shepherd, M.D. |
| 11:00 | Echo simulation student test 13:00 -13:10 Student test First group 13:15-13:25 Student test Second group |
| 12:00 | Lunch |
| 13:00 | Echo simulation final tests (4 Hours) Final test First group 13:00-15:00 Final test Second group 15:00-17:00 |
| 17:00 | Adjourn |