

## University of Iowa NEONATAL HEMODYNAMICS PROGRAM

The University of Iowa (UI) program is fully funded 1-year fellowship training based on the 2011 American Society of Echocardiography guidelines/standards.<sup>2</sup> Aside from 1 month of NICU fellow service designed to familiarize non-UI trainees with the operations, population and protocols unique to the UI program, the year is protected for Neonatal Hemodynamics training. NICU service may be completed concurrently with phase I. The duration of each phase will vary by trainee based on acquisition of competencies and individual progress. Longitudinal exposure to primarily hemodynamics cases and primarily cardiology teaching/cases is encouraged and will be facilitated collaboratively independent of training phase.

- Phase I – Image Acquisition. Ultrasound physics tutorial utilizing online resources with a log-book of modules completed and a quiz, this will be completed concurrently with familiarization with normal and abnormal anatomy using a dedicated echocardiography simulator (EchoCOM, Leipzig Germany) and the TnECHO website/app. After successful demonstration of these skills, hands-on training will be undertaken in the Pediatric Echocardiography lab under the co-supervision Neonatal and Cardiology departments.
- Phase II – Neonatal Hemodynamics Integration. Hands-on training in the NICU with graduated supervision of Hemodynamics consults including imaging, measurement, interpretation and therapeutic decision making with regular case reviews. Training at UI will provide a wide range of clinical exposure including asphyxia, ECMO referrals, congenital diaphragmatic hernia and a high volume of periviable neonates (e.g. 22<sup>+0</sup> – 23<sup>+6</sup> weeks). Training in limited head ultrasound screening and point of care ultrasound will be provided.
- Longitudinal Academic Progress. Academic supervision on a minimum of 1 research project suitable for presentation at a scientific meeting and publication as a first author in a peer reviewed journal. An academic oversight committee will be formed for each trainee.
- On call. Limited on call commitments will continue throughout the year in order to maintain competency in intensive care skills and procedures [3-4/month]. Pay, duty hour restrictions and vacation policy will be standardized in accordance with University of Iowa policy.

Evaluation: Comprehensive evaluation will be performed on the basis of the achievement of competencies. Throughout training, fellows are expected to keep a log book of scans completed including the indication, their role in the consultation (clinical data collection, image acquisition and which plane(s), duration, reporting). Learners will be expected to complete a practical test of image acquisition covering recognition of red flags for common cardiovascular problems and congenital heart diseases utilizing simulator cases to complete phase I. Thereafter imaging skills will be evaluated using objective scoring tools using Direct Observation of Practical Skills (DOPS) assessments throughout the training. By the end of training, fellows should be able to adequately capture 90-110 images in  $\leq 30$  minutes. Fellows will provide assessment, impression and plan for every scan and will be critiqued on their problem formulation, interpretation and physiological knowledge. The intent is to document progress in sophistication of analysis and concordance with expert opinion. Upon completion of training, the candidate is expected to function as a competent and independent specialist in neonatal hemodynamics. A successful candidate must acquire a working knowledge of the theoretical and practical aspects of the discipline including its foundations in science and research.

## ELIBILITY FOR TRAINING

Eligible trainees may be either Neonatologists eligible for faculty practice in a tertiary NICU or senior neonatal trainees, in either the final year or having completed their core Neonatal-Perinatal Medicine training, at the time of starting advanced training in Neonatal Hemodynamics. Demonstration of clinical excellence in neonatal intensive care is a mandatory prerequisite. Experience or a demonstrated interest in academic neonatal hemodynamics or cardiology is desirable. Successful applicants will be pioneers in the field. As such, candidates should present a considered and sustainable plan as to the implementation of a clinical and academic neonatal hemodynamics program in a tertiary NICU. Trainees must be eligible for a license to practice medicine according to the Iowa Medical Board requirements (see link below) including completion of steps I and II of the United States Medical Licensing Exam (USMLE) and be either a United States (US) citizen, permanent resident of the US or be eligible for a work visa (see link below). Please contact us if you have questions about eligibility for visa or licensure.

### Relevant Links

Iowa Medical Board: <https://medicalboard.iowa.gov/licensure/index.html>

US Non-Immigrant Visa information: <https://travel.state.gov/content/travel/en/us-visas/visa-information-resources/all-visa-categories.html>

## APPLICATION PROCESS

Applicants may express their interest in training by contacting the neonatal Division Director [Dr. Patrick McNamara], Program Director [Dr. Regan Giesinger]. Applications should include a curriculum vitae and a letter of intent describing the candidate's suitability for training and their goals with an emphasis on how they plan to implement hemodynamics training as a part of their clinical and academic career plan. An optional letter of support from either a neonatal or cardiology mentor may be included. Applications should be submitted via email to Regan Giesinger. Applications should be submitted no later than June 30<sup>th</sup> of the calendar year prior to the desired July start date [e.g. June 30, 2019 for a July 2020 start date] in order to allow adequate time for processing and licensure. A committee including Drs McNamara, Giesinger, Ashwath (or delegate), and member at large will review all applications according to a standardized template. A short list of candidates achieving a sufficient score will be offered an interview which may be conducted either in person or via telephone depending on the Candidate's preference. Both successful and non-successful candidates will be notified in writing within 2 weeks of the interview date.